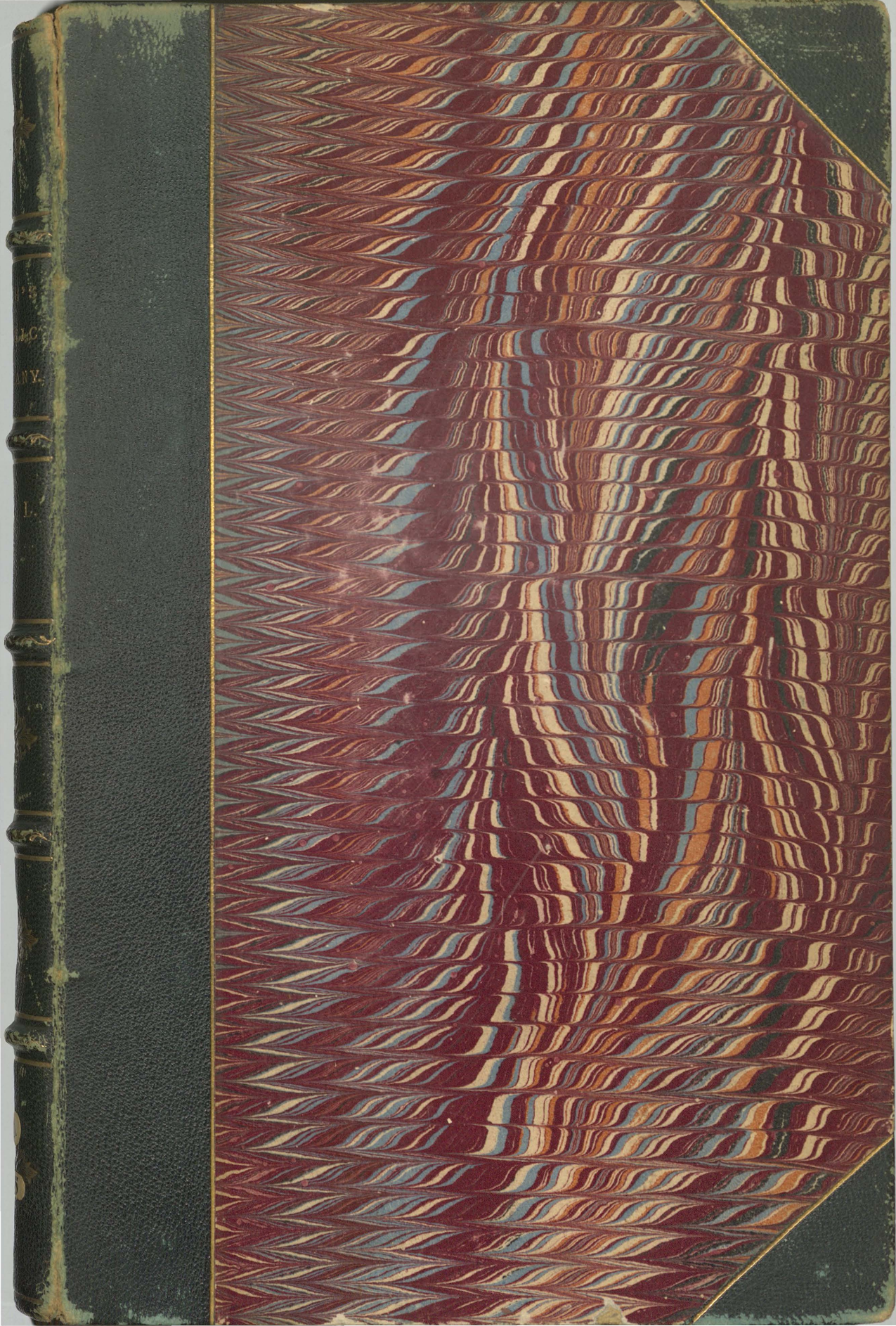








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EXOTIC BOTANY:

CONSISTING OF

COLOURED FIGURES,

AND

SCIENTIFIC DESCRIPTIONS,

OF SUCH

NEW, BEAUTIFUL, OR RARE PLANTS

AS ARE WORTHY OF CULTIVATION IN THE
GARDENS OF BRITAIN;

WITH

REMARKS ON THEIR QUALITIES, HISTORY, AND
REQUISITE MODES OF TREATMENT.

BY

JAMES EDWARD SMITH, M.D. F.R.S. &c. &c.

PRESIDENT OF THE LINNEAN SOCIETY.

THE FIGURES BY

JAMES SOWERBY, F.L.S.

HONORARY MEMBER OF THE PHYSICAL SOCIETY OF GÖTTINGEN.

" Another Flora there, of bolder hues,
And richer sweets, beyond our garden pride,
Plays o'er the fields, and showers with sudden hand
Exuberant spring."

Thomson.

VOL. I.

LONDON:

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"Another flower here of better hue,
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Exuberant spring."

VOL. I.



21. 8. 82.

1.953-4.

TO
WILLIAM ROSCOE, ESQ. F.L.S.
LIVERPOOL.

Dear Sir,

WHEN, in your delightful retirement at Allerton, I felt transported to the villa of your own Lorenzo, I was agreeably surprised to find how large a portion of your attention Scientific Botany had shared, amid your ardent devotion to the Historic Muse. Let me thus remind you of that time, so grateful to my recollection, and which, if I may judge by subsequent transactions, you do not wish to forget. Long had I been anxious to know the Historian of the Medici, but I now wish far more to cultivate and preserve the regard of a Roscoe.

Allow me to subscribe myself,

Dear Sir,

Your obliged and affectionate friend,

J. E. SMITH.

TO
WILLIAM ROSCOE, ESQ. F.R.S.
LIVERPOOL.

Dear Sir,

It was, in your delightful retirement at
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PREFACE.

SEVERAL periodical publications, illustrative of exotic plants, have been at different times undertaken in this country, and some have been continued with great success; yet none of them can keep pace with the botanical riches daily flowing in upon us.

The chief aim of the present undertaking is not to cooperate with those publications which only describe the plants actually blossoming in the English gardens; still less is it to interfere or contend with such pleasing and useful works. It will rather be the object of our labours to introduce to the curious cultivator plants worthy of his acquisition from all parts of the globe, and to teach those who have correspondents abroad what to inquire for. Some opportunities also may fall in our way of making known the flowers of plants, which have long been cultivated among us without producing fructification. Hence it will appear how far they are worthy of that continued

attention, which they have as yet so ill repaid. Yet these are not our only intentions. Any new or rare plants; any which have not been hitherto well delineated in their native colours; in short, any thing worthy to gratify the botanical taste now so prevalent, will be the object of this work.

For abundance of most interesting materials we can be at no loss. Not only the stores which Mr. Sowerby and myself have been from time to time accumulating, and which we have hitherto found no successful mode of publishing, but many other treasures are at our command. Mr. Lambert has most liberally intrusted to us his collection of New Holland sketches, all the original specimens of which, chiefly collected by Dr. White at Port Jackson, have long been in my herbarium. Captain Hardwicke, so well known by his interesting travels in India, unsolicited and without reserve has offered me the use of his immense collection of botanical drawings, the most accurate and beautiful ever brought to England. Above all, Sir Joseph Banks, with that liberality which no one has more constantly witnessed in him than myself, has freely offered, out of the abundance of his riches, any thing which may be

desirable for this publication, and for which he has no other particular destination. The favours of various friends besides, will be mentioned in the course of the work.

In the descriptions I shall endeavour to reconsider all that has been done before, and to define new objects with precision. The language will be entirely English, progressively altered or improved by the naturalization of any words that experience may show to be eligible. Some terms which in the progress of our *English Botany* have scarcely become perfectly naturalized, may in this work entirely lay aside their Latin construction. Of Mr. Sowerby's abilities for his share of the task it would be improper, as well as superfluous, to express any thing here; but it would be ungrateful in me not to say that, after so many years' experience, I enter on a new work, assisted by his pencil, with the most perfect confidence and satisfaction.

J. E. SMITH.

Norwich,
Dec. 1. 1804.

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J. E. SMITH.

Notwich,
Dec. 1. 1801.





Humea elegans.

Dec. 2. 1804. Dillwyn. By J. Sowerby, London.

TAB. 1.

H U M E A elegans.

Rose-coloured Humea.

SYNGENESIA Polygamia-æqualis.

Receptacle minute, glandular. *Down* none. *Calyx* loosely imbricated, membranous, pointless. *Florets* about 3, tubular. *Antheras* awned.

SPECIMENS of this elegant plant have long since been sent to England from the neighbourhood of Port Jackson, New South Wales; but its appearance was altogether so new and extraordinary, that no botanist could determine its genus, or even its natural order. Its proper class in the Linnæan System was not suspected till the summer of 1804, when Lady Hume fortunately had several plants blossom in her choice collection at Wormleybury, Herts, from seeds communicated by the Right Honourable Sir Joseph Banks. The beauty of its wide-spreading drooping panicle, and innumerable shining rose-coloured flowers, which sometimes vary to white, render this plant a great acquisition to the Green-House, in which it succeeds without any peculiar attention. It is moreover desirable for its fragrance, which, though much too strong in the leaves, partakes, in the panicle, of the odour of the Hautboy Strawberry, with some resemblance to the Red Cedar wood. The flowers begin to expand in July, and continue through the autumn. The root is probably annual; but this point remains, as yet, undecided.

The stem is herbaceous, round, filled with spongy pith, rough (like the leaves) with short rigid viscid pubescence. Leaves alternate, sessile, lanceolate, acute, slightly waved at their edges, and clasping the stem by their heart-shaped base. The upper ones gradually diminish into bracteas. Panicle drooping, very much branched, composed of innumerable scattered alternate drooping flowers on capillary stalks. Each stalk is accompanied by a small bractea at its base, and clothed with alternate, loosely imbricated, membranous scales, of a shining rose-colour, with a green rib or keel. These scales are gradually larger towards the flower; and the uppermost,

which are much the largest, constitute the calyx, containing 2 or 3 florets. The receptacle is small, glandular, but destitute of scales or bristles. Florets regular, tubular, all perfect and fertile; their tube cylindrical, glandular; limb campanulate, purplish, with 5 equal revolute segments. Anthers 5, united, crowned with 5 sharp points. Germen oblong, glandular. Style cloven. Stigmas spreading, capitate. Seed oblong, without any crown or wing.

This genus should be placed near *Eupatorium* in the Linnæan System. It is unquestionably distinct from all hitherto described. We have named it after the accomplished Lady to whom we are obliged for its introduction, and who, for her botanical taste and knowledge, as well as the number of new plants she has introduced into England, and which she is always in the most liberal manner disposed to communicate, well deserves such a compliment.

Tab. 1. exhibits a part of the panicle, with a leaf, of the natural size. A magnified calyx and floret, with a more enlarged dissected floret, are subjoined.





Dillenia speciosa
Dec. 2 1804. Published by J. Sowerby, London.





Dillenia speciosa
Dec. 2. 1804. Published by J. Sowerby, London.

TAB. 2, 3.

DILLENIA speciosa.

Great Dillenia.

POLYANDRIA Polygynia.

Calyx inferior, of 5 coriaceous permanent leaves. *Petals* 5.

Capsules several, compressed, many-seeded, ranged circularly round a pulpy receptacle.

Leaves elliptic-oblong, simply serrated. Flowers solitary. Stigmas lanceolate.

Dillenia speciosa. *Thunb. Tr. of Linn. Soc. v. 1. 200.*

Willden. Sp. Pl. v. 2. 1251.

D. indica. *Linn. Sp. Pl. 745.*

Syalita. *Rheed. Malab. v. 3. 39. t. 38, 39.*

OF all the tropical trees this is one of the most magnificent. Rheede informs us that it rises in the woods of Malabar, where it is very frequent, to the height of 40 or 50 feet, with an extremely thick stem, covered with a thick scaly bark, which when wounded discharges great abundance of an astringent watery fluid. It ripens fruit in December and January, beginning to bear about the fourth year of its age, and continuing in vigour for fifty years or more.

Linnæus derived his knowledge of this plant entirely, perhaps, from the excellent figure and description in the writer just quoted; for he never possessed, nor probably ever saw, a specimen, except what grew from seed in the garden of Clifford, and scarcely survived three weeks. This however gave him an opportunity of introducing it as a new genus into his *Hortus Cliffortianus*, and of complimenting the celebrated Dillenius with its name. No subsequent writer has contributed any new information respecting it.

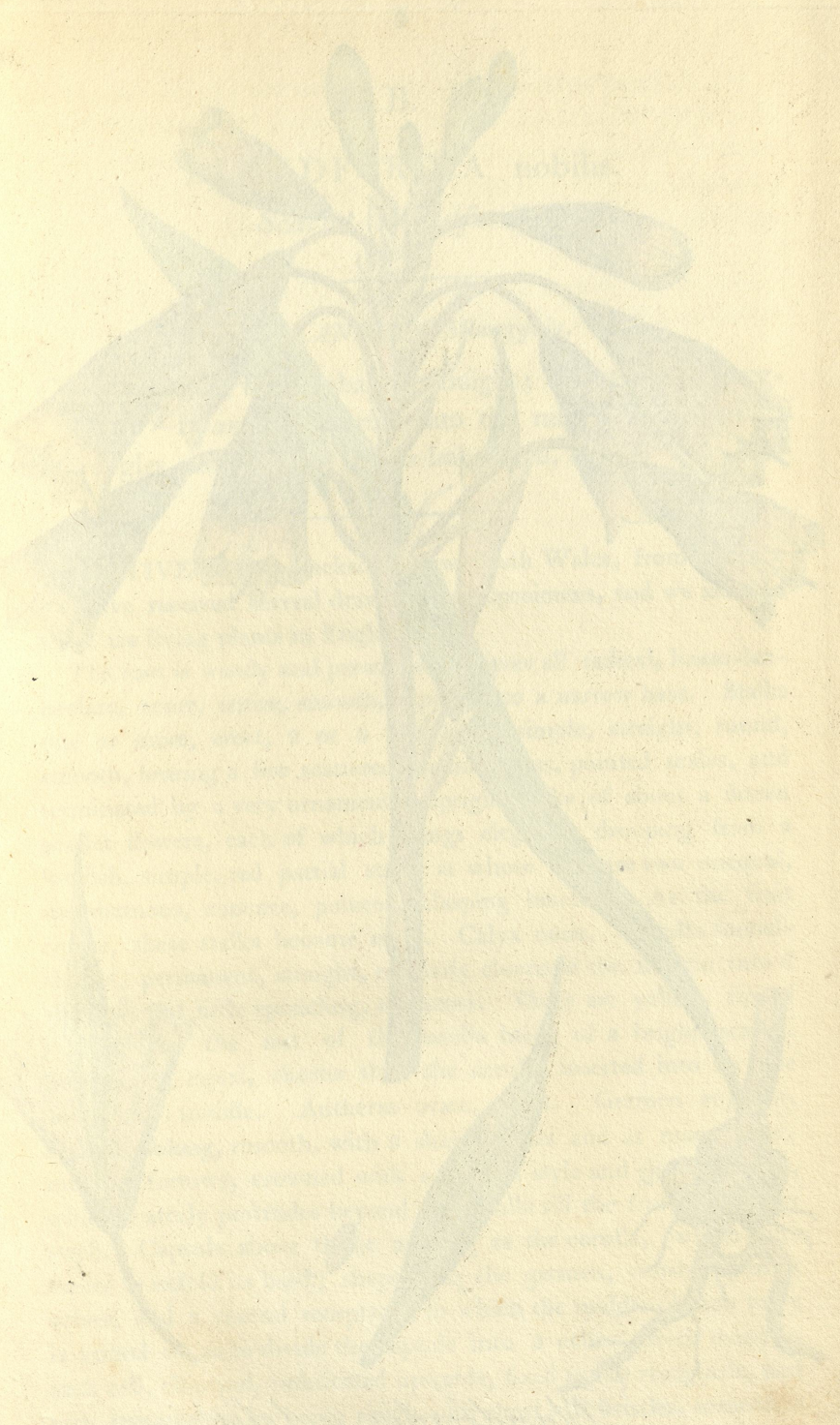
Some years ago Dr. Roxburgh, at my particular request, favoured me with excellent dried specimens, along with the fruit in spirits, and the same gentleman has sent Lady Hume a fine young tree of this species, which is now in a very thriving state. It is presumed

to be the first ever brought alive to Europe. For the drawings from which our figures were taken I am obliged to Captain Hardwicke.

The leaves are crowded about the ends of the branches, on winged footstalks downy underneath, and are from 4 to 12 inches in length, oblong, somewhat elliptical, bluntish, sharply but simply serrated, with numerous parallel veins, roughish to the touch, but not hairy, except on the back of the veins. Flowers terminal, solitary, on simple round stalks, large, handsome, and very fragrant. Calyx of 5 large, concave, coriaceous leaves, which at length become pulpy, enveloping the capsule, and forming an eatable fruit, which, according to Rheede, is too acid to be much used, except mixed with sugar, broth, or other materials. Petals white, with a tinge of green and red. Stamens very numerous, yellow, linear, the points of their antheras recurved and imbricated. Germen superior, roundish, furrowed, crowned with 20 lanceolate, white stigmas, spreading in the form of a star. Capsule of 20 cells, containing numerous compressed seeds, fringed on their outer edge, which Rheede seems not to have seen in a perfect state. All the parts of the flower are permanent, and enfolded by the calyx around the capsule.

Tab. 2. shows a flowering branch of the size of life. *a* is a stamen; *b* germen; *c* stigmas.

Tab. 3. Ripe calyx, cut across to show the capsule, &c. *a* seed.





Blandfordia nobilis

Dec. 1. 1864. Published by J. E. Sowerby, London.

TAB. 4.

BLANDFORDIA nobilis.

*Scarlet Blandfordia.**HEXANDRIA Monogynia.*

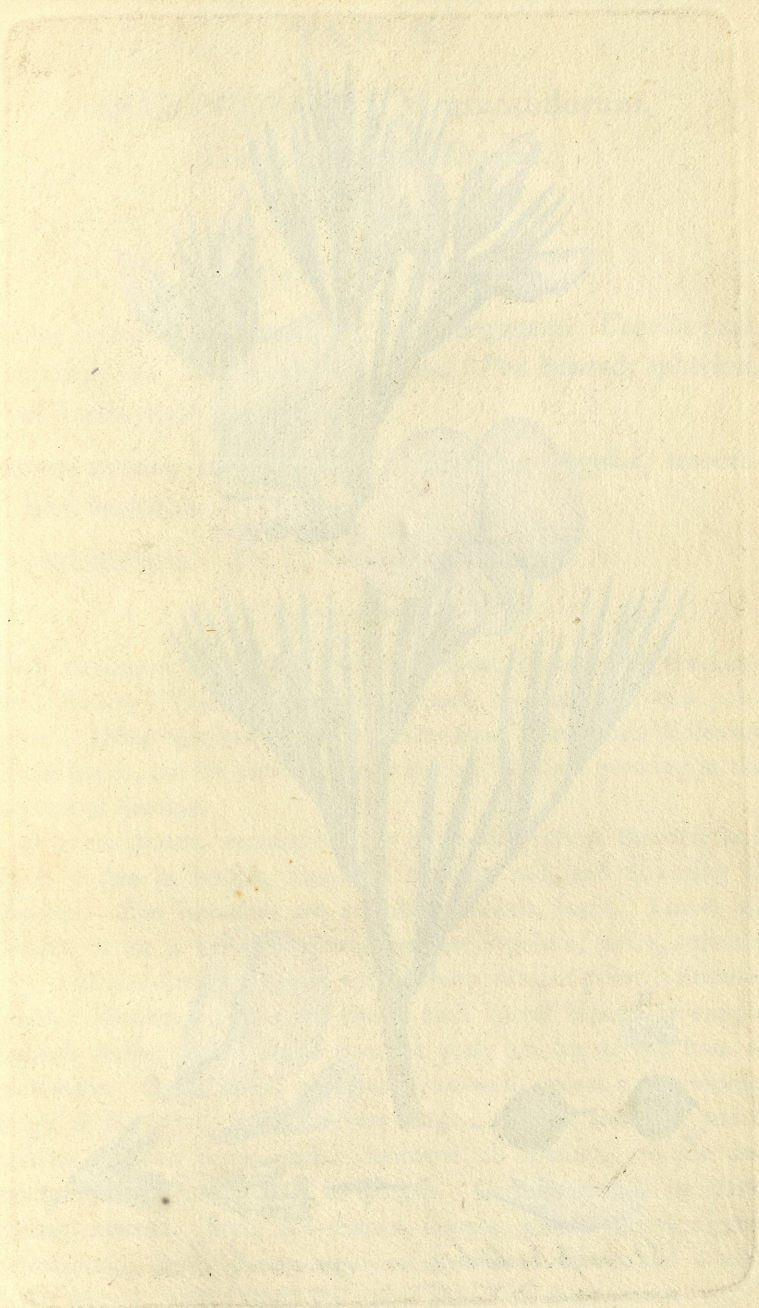
Corolla inferior, funnel-shaped, straight; its margin in 6 segments. *Filaments* inserted into the tube. *Capsule* with 3 angles, and 3 cells. *Seeds* imbricated, bristly.

A NATIVE of Port Jackson, New South Wales, from whence we have received several drawings and specimens, and we are told there are living plants in England.

The root is woody and perennial. Leaves all radical, linear-lanceolate, acute, entire, smooth, tapering to a narrow base. Stalks one or more, erect, 2 or 3 feet high, simple, straight, round, smooth, bearing a few scattered, membranous, pointed scales, and terminated by a very ornamental upright spike of about a dozen scarlet flowers, each of which hangs elegantly drooping from a longish, simple, red partial stalk, at whose base are two unequal, membranous, concave, pointed, clasping bracteas. As the fruit ripens, these stalks become erect. Calyx none. Corolla funnel-shaped, permanent, straight, regularly cloven at the margin into 6 shallow, but little spreading, segments. These are yellow, tipped with green, the rest of the corolla being of a bright scarlet. Stamens 6, equal, shorter than the corolla, inserted into its tube about the middle. Antheras ovate, erect. Germen superior, stalked, oblong, smooth, with 3 sharp angles and as many intermediate furrows, crowned with a conical style and simple stigma, which scarcely protrudes beyond the corolla till the fruit begins to swell. Capsule above thrice as long as the corolla, (which continues to enfold its base,) shaped like the germen, consisting of 3 valves, and a central receptacle, to which the middle of each valve is united so as to divide the capsule into 3 cells. Seeds many in each cell, elliptical, imbricated upwards, fixed to the receptacle, and very remarkable for being rough with short soft bristles, somewhat like the seeds of *Strelitzia*.

Mr. Andrews's *Blandfordia*, named after the present Marquis of Blandford, being the *Galax* of Linnæus, we have found no name more worthy to decorate this genus, which belongs to what Linnæus calls the *Patrician* order of plants, among Jussieu's *Asphodeli*, and may stand near *Aloe* in the Linnæan System.

Tab. 4. a. root. b. flower opened with the enlarging germen.
c. fruit nearly ripe. d. seed.





Gompholobium grandiflorum.

Dec. 1. 1844. Published by, J. Sowerby, London.

TAB. 5.

GOMPHOLOBIUM grandiflorum.

*Large-flowered Air-pod.**DECANDRIA Monogynia.*

Calyx bell-shaped, simple, in 5 deep segments. *Corolla* papilionaceous. *Stigma* simple, acute. *Pod* inflated, spherical, of 1 cell, with many seeds.

Leaves ternate, linear, straight. Branches angular, smooth. Keel beardless.

Gompholobium. *Tr. of Linn. Soc. v. 4. 220.*

NO account of this genus, except its short character in the Linnean Society's Transactions above quoted, has hitherto been published. Dried specimens of four species from New South Wales are in our hands, but we know not that any of them are growing in the gardens of Europe.

G. grandiflorum, remarkable for its showy yellow flowers, is a shrub 3 feet in height, found in a sandy soil, and flowering in October. The branches are angular, smooth, leafy. Leaves alternate, 3 on a footstalk, linear, narrow, revolute, entire, smooth, very stiff and straight, tipped with a sharp straight point. Stipulas small. Flowers 2 or 3 at the end of each lateral branch on simple smooth stalks, with a small concave scaly bractea at the base of each stalk. *Calyx* large, coriaceous, smooth, except a fine woolly fringe at its edge. Standard very large. Wings and keel much smaller, of two petals each. Stamens all distinct, simple and smooth, somewhat unequal in length. Germen on a short stalk, oblong, smooth. Style awl-shaped, simple, with a sharp stigma, permanent. Pod globose, rigid, of 2 inflated valves, and 1 cell. Seeds several, ranged along the upper suture on short stalks.

Tab. 5. a. calyx. *b.* standard. *c.* one of the wings. *d.* keel. *e.* stamens. *f.* germen and style. *g, g.* pod. *H.* seeds somewhat magnified.

COMPTOLIBIUM grandiflorum.

Large-flowered shrub.

DECALEPHANTACEAE.

Shrub 2-3 ft. high, simple in 2 days. Corolla papery.
homocentrous, 5-lobed, lobes narrow, 1-2 inflated, spherical.
of 1 cell, with many seeds.
Leaves alternate, linear, serrate, branches angular, smooth.
Red berries.

Comptolibiaceae. T. & G. Bot. Soc. v. 1. p. 122.

No account of this genus, except its short character in the In-
dian Society's Transactions above quoted, has hitherto been pub-
lished. Dried specimens of four species from New South Wales are
in our hands, but we know not that any of them are growing in the
gardens of Europe.

C. grandiflorum, remarkable for its always yellow flowers, is a
shrub 2-3 ft. in height, found in a sandy soil, and flowering in
October. The branches are angular, smooth, leafy. Leaves al-
ternate, 3 on a footstalk, linear, narrow, revolute, entire, smooth,
very stiff and straight, tipped with a sharp straight point. Subula
small. Flowers 3 or 4 at the end of each lateral branch on simple
smooth stalks, with a small concave sepal, bracts at the base of
each stalk. Calyx large, coriaceous, smooth, except a few woolly
hairs at its edge. Standard very large. Wings and keel much
smaller, of two-folds each. Stamens all distinct, simple and
smooth, somewhat unequal in length. Germen on a short stalk,
oblong, smooth. Style 2-3 shaped, simple, with a sharp stigma.
permanence. Pod globose, rigid, of 2 inflated valves, and 1 cell.
Seeds several, ranged along the upper suture on short stalks.

Tab. 3. a. calyx. b. standard. c. one of the wings. d. keel.
e. stamens. f. germen and style. g. h. pod. H. seeds somewhat
magnified.





Rhododendron arboreum

Painted 1848. Published by T. & A. Sowerby, London

TAB. 6.

RHODODENDRON arboreum.

Indian Tree Rhododendron.

DECANDRIA Monogynia.

Calyx inferior, in 5 divisions. *Corolla* monopetalous, somewhat funnel-shaped. *Stamens* declining. *Capsule* of 5 or 10 cells.

Leaves shining, lanceolate, downy beneath. Clusters terminal. Capsule of ten cells. Stem arboreous.

THIS most magnificent new species of *Rhododendron* was first noticed by Captain Hardwicke on a tour to Sireenagur in 1796, growing in the mountainous tract called the Sewalic chain, which separates the plains of Hindostan, between 75° and 85° east longitude, from the Himmaleh mountains. It is generally found in elevated situations in forests of oak; the soil a rich black vegetable earth, on a stony bed. It flowers in March and April, and ripens seed late in May or early in June, a few days before the commencement of the periodical rains. The natives use the wood for making the stocks of matchlocks, or common musquets of Hindostan. The provincial name is *Boorans*.

The stem is columnar, 20 feet or more in height, 16 to 24 inches in diameter. Bark cracking and scaling off in large portions, light as cork, formed of numerous layers 1-48th of an inch thick, connected by a light cellular substance, friable when dry. Branches scattered, ascending, straggling, crooked and brittle. Leaves at the summits of the branches, scattered, on shortish downy footstalks, ovate-lanceolate, acute, entire, revolute; smooth and of a dark shining green above; beneath clothed with white dense downiness, and furnished with a strong rib, and many parallel veins. Clusters terminal, of from 10 to 15 large pedunculated deep-crimson flowers, of little fragrance and short duration, spreading in every direction. Bractees very small. *Calyx* permanent, small, five-cleft, obtuse, reddish at the edge; the two upper segments largest. *Corolla* with

a longish bell-shaped tube, and broad five-lobed border; the lobes cloven, rounded, the two uppermost largest. Stamens 10, declining, unequal in length, smooth, inserted into the receptacle, shorter than the corolla, and falling with it. Anthers oblong, incumbent. Germen superior, cylindrical, white, downy, with 10 furrows which receive the stamens. Style thread-shaped, permanent, longer and thicker than the stamens. Stigma capitate, with 10 notches. Capsule oblong, of 10 cells, a novel circumstance in this genus. Seeds numerous, very small, ovate, compressed, smooth, brown.

We are obliged to Captain Hardwicke for the above description and a drawing, both made on the spot. It is hoped the seeds, which that gentleman has liberally distributed in England, will enrich our collections with this noble tree.

a represents a stamen, *b* the germen and style, *c* the half-ripe germen cut across, all of the natural size.





Glaucium fulvum^a

Jun. 1. 1805. Published by J. Sowerby London.

TAB. 7.

GLAUCIUM fulvum.

*Orange Horned-Poppy.**POLYANDRIA Monogynia.*

Calyx of 2 leaves. *Petals* 4. *Pod* superior, linear, of 2 cells and 2 or 3 valves. *Seeds* numerous, dotted.

Stem smooth. Stem-leaves rounded, waved. Pods rough. Flowers nearly sessile.

Chelidonium corniculatum. *Donn. Cant.* 100?

OUR figure was taken from the garden of the Rev. Mr. Watts of Ashill in September last. We have cultivated this plant for two or three years, from seed originally obtained from the Cambridge garden, by the name of *Chelidonium corniculatum*. How different that species is, may be seen by the figure in Curtis's *Flora*, fasc. 6. t. 32, and the description of it in *Fl. Brit.* as *Glaucium phœnicium*. The plant before us bears a greater resemblance to *Glaucium luteum*, the Yellow Horned-Poppy of our sea-shores; but differs in the orange colour of its flowers, and in being strictly annual, while that is now known to be perennial. The whole herb is also of a more blue cast, and, as an essential specific character, it is observable that the flowers are nearly sessile. We can find no synonym for it in the old writers. Some persons may guess it to be a mule, from *G. phœnicium* having received the pollen of *G. luteum*; but its abundant fertile seeds are unfavourable to such a supposition. We presume it to be a native of the south of Europe. It easily propagates itself by seed on a light dry soil, and deserves a place in every garden.

a shows the inner side of a petal; *b* the germen with a few of the stamens.

TAB. 7.

GLAUCIUM

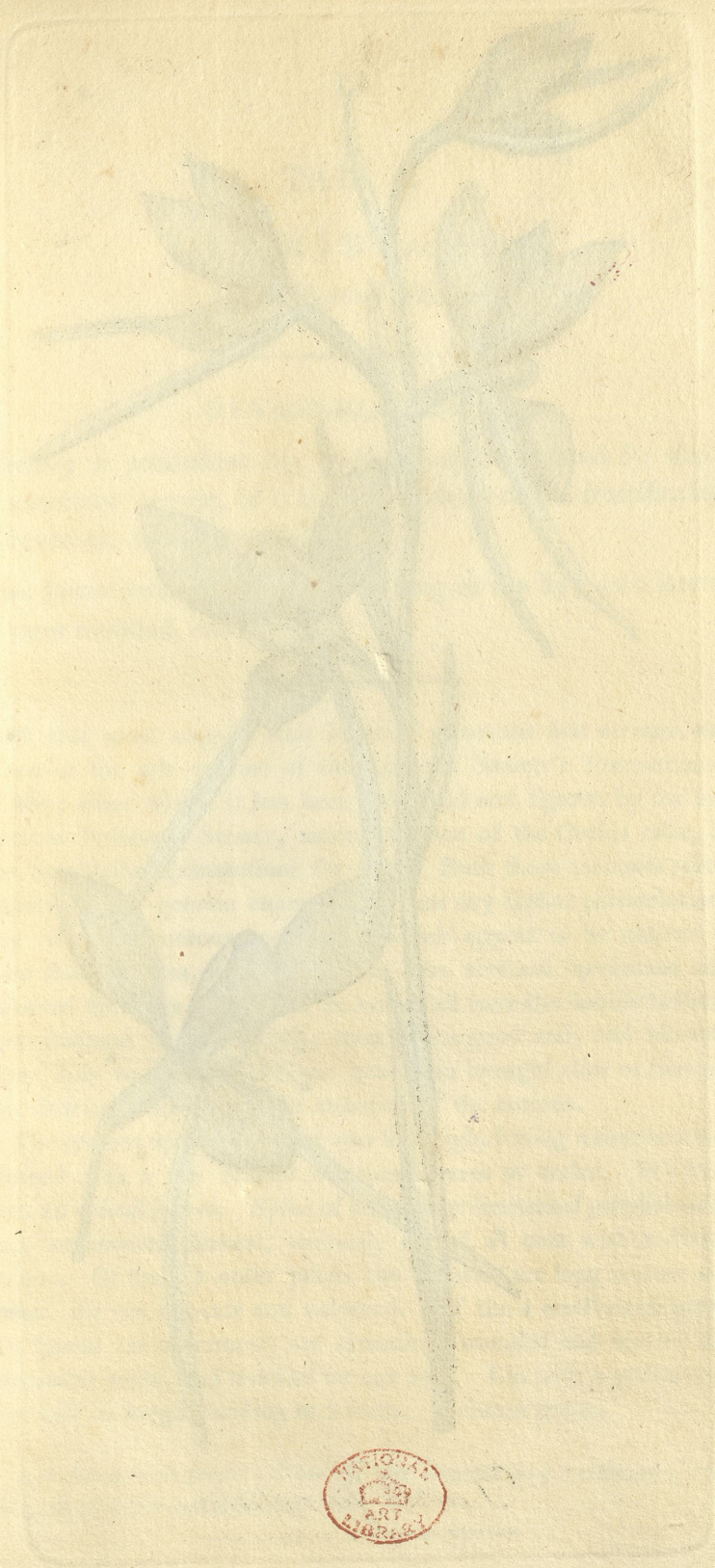
Orange Horned-Popp.

POLYANDRIA

Calyx of 2 leaves. Petals 4. Pet. spreading linear of 2
cells and 2 or 3 valves. Seeds numerous, round.
Stem smooth. Stem-leaves rounded, wavy. Tobs tough.
Flowers nearly sessile.
Chelidonium corniculatum. Donn. & Hook. 402?

Our figure was taken from the garden of the Rev. Mr. W. W. Ashill in September last. We have cultivated this plant for two or three years, from seed originally obtained from the Cambridge garden, by the name of *Chelidonium corniculatum*. It is different from that species in many respects by the figure in Curtis's Fl. Brit. A. 32, and the description of it in P. B. as *Chelidonium corniculatum*. The plant before us bears a greater resemblance to *Chelidonium majus*, the Yellow Horned-Popp. of our garden; but differs in the orange colour of its flowers, and in being strictly annual, while that is now known to be perennial. The whole herb is also of a more blue cast, and, as an essential reason, it is different from that the flowers are nearly sessile. We are not aware of any synonym for it in the old writers. Some, however, may give it to be a native, from G. *Chelidonium* having received the name of *G. majus*; but its abundant fertile seeds are unproductive to such a reputation. We presume it to be a native of the south of France. It is a plant that grows itself by seed on a light dry soil, and requires a place in every garden.

to show the inner side of a petal; & the former with a few of the
stamens.





Diuris punctata

Jan. 1. 1805. Published by J. A. Sowerby, London.

TAB. 8.

DIURIS punctata.

Blue Dotted Diuris.

GYNANDRIA *Diandria.*

Nectary a pendulous lip, without a spur. *Petals* 9; the 5 outermost largest, of 2 kinds, *Column* of the fructification reversed, the *lid* parallel.

Two lower petals linear, thrice as long as the lip; two lateral ones rounded, entire.

OF this most singular and beautiful genus the first account was given in the 4th volume of the Linnean Society's Transactions, p. 222; since which it has been described and figured by the ingenious Professor Swartz, among the rest of the *Orchis* tribe, in the Stockholm Transactions for 1800. Both those accounts relate merely to the generic character, nor has any author particularized any of the numerous species, all which appear to be natives of New South Wales, from whence we have received specimens and coloured drawings. As far as we know, all have the double bulbous root frequent in the *Orchis*; they love a good soil, and blossom from July to October. None have been brought alive to Europe, but they are well worthy the attention of the curious.

The present species is about two feet high, having a simple stem, clothed with a few remote sheathing leaves or scales. We have seen no radical leaves. Spike of a few large bracteated purplish-blue very ornamental flowers, variously dotted all over with a darker colour. Of their 5 outer petals the 2 lowest are long narrow and green, the rest obovate and coloured. Of the 4 small inner petals the lateral (or outermost) are spreading, rounded and entire; the innermost acute, and notched on one side. Lip with a yellow furrow half its length, ending in 2 teeth. Column green.

a, *a* the lateral petals; *b* one of the innermost; *c* column; *d* its lid; all of their natural size.

TAB. 8.

DIEBIS' panchala.

Blue Dotted Dingo.

OXYMELIS Dingo.

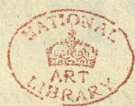
Two lower petals in the tube as long as the lip; two lateral ones rounded, entire.

Two lower petals in the tube as long as the lip; two lateral ones rounded, entire.

Of this most singular and beautiful genus the first account was given in the volume of the Linnean Society's Transactions, 1795; since which it has been described and figured by the Linnean Professors, Swartz, among the rest of the Orchidaceae in the 2nd edition of Transactions for 1800. Both these accounts relate merely to the generic character, and have any author particularly any of the numerous species, all which appear to be native of New South Wales, from whence we have received specimens and coloured drawings. As far as we know, all have the double bulbous root frequent in the Orchidaceae; they form a good soil, and blossom from July to October. There have been brought alive to Europe, but they are well worthy the attention of the cultivator.

The present species is about two feet high, having a simple stem, clothed with a few remote, shining, leathery or scales. We have seen several flowers, spikes of a few large, fringed, purplish-blue very ornamental flowers, variously dotted all over with a darker colour. Of these 2 lower petals the 2 lower are long narrow and green, the rest obscure and coloured. Of the 4 small inner petals the lateral (very small) are spreading, rounded and entire; the innermost (very small) are round and entire. The lip with a yellow line now half its length - ending in a circle. Column green.

As the lateral petals & one of the innermost; & column & lip all of these natural size.





Diuris aurea

Jan. 1. 1805. Published by Jas. Sowerby, London.

TAB. 9.

DIURIS aurea.

Golden Diuris.

GYNANDRIA Diandria.

Nectary a pendulous lip, without a spur. *Petals* 9; the 5 outermost largest, of 2 kinds. *Column* of the fructification reversed, the *lid* parallel.

Two lower petals lanceolate, not twice as long as the lip; two upper elliptical, acute, with short claws.

Diuris. Swartz in *Stockh. Trans.* for 1800. 229. t. 3. f. M.

THIS, as we are informed, flowers in October. The stem is 12 or 14 inches high, with one or two narrow upright leaves from the root, which is a double bulb. Flowers from 3 to 5 in the spike, each with its bractea as in the last. They are but half the size of that species, and of a bright golden yellow, somewhat spotted about the lip (but not in the larger petals) with red. The lowest petals are lanceolate, yellowish green, about half as long again as the lip; the 2 uppermost elliptical, acute, with short claws. Of the small petals the lateral or outermost are spatulate, obtuse, and entire; the inner ones lanceolate, acute.

This is the species which I communicated to Dr. Swartz, and which he has figured. It is with great diffidence we persist in reckoning 9 petals (or calyx-leaves as he chooses to call them) when he who has so deeply studied this order could find but 7, apparently overlooking the small sharp inner pair. The column in this is more dilated than in the foregoing.

A, A are the bases of 2 upper petals cut off. B base of central or odd petal. C lip cut off, showing its 2 sharp teeth on the upper side. D, D bases of lower petals. E, E lateral petals entire. F, F small inner petals, not mentioned by Dr. Swartz. G lid of the fructification, with cells which held the antheras. H column.

TAB. 9.

PLANT. 8. 1848

Calicut, India.

OF THE PLANT

Western a pendulous liana, without a spur. Leaves 3; the 3 outermost largest, of a kind. Calyx of the fructification reversed, the 1st parallel.

Two lower petals lanceolate, not twice as long as the tip; Two upper elliptical, acute, with short claws.

Dissected in double. Trans. for 1800. 220. 1. 2. A. M.

This, as we are informed, flowers in October. The stem is 12 or 14 inches high, with one or two narrow upright leaves from the root, which is a double bulb. Flowers from 3 to 5 in the spike, each with its bract as in the last. They are but half the size of that species, and of a bright golden yellow, somewhat spotted about the tip (but not in the larger petals) with red. The lower petals are lanceolate, yellowish green, about half as long again as the tip; the 2 uppermost elliptical, acute, with short claws. Of the small points the lateral or outermost are acuminate, obtuse, and entire; the inner ones lanceolate, acute.

This is the species which I communicated to Dr. Swartz, and which he has named. It is with great difference of fruit in reaching 9 petals (or calyx-leaves as he chooses to call them) when he who has so deeply studied the other root-kind but I apparently overlooking the small sharp inner part. The column in this is more dilated than in the foregoing. A, A are the bases of 2 upper petals on the 1st base of central or odd petals. C is cut off, showing the 1st base of petals on the upper side. D, D bases of lower petals. E, E lateral petals entire. F, F small inner petals, not mentioned by Dr. Swartz. G, G lid of the fructification, with cells which hold the anthers. H column.





Dendrobium speciosum

TAB. 10.

DENDROBIUM speciosum.

Great Dendrobium.

GYNANDRIA Diandria.

Nectary a lip without a spur. *Petals* 5; the 2 lower external ones forming a pouch with their base. *Lid* vertical. *Flowers* often reversed.

Flowers reversed. Cluster solitary, many-flowered. Lip three-lobed. Leaves radical, coriaceous.

GROWS on rocks and trees in New South Wales, where the natives call it *Wer-gal-derra*. It is a fine species of a new genus formed by Dr. Swartz, with great judgment, out of the *Epidendrum* of authors, another species of which is my *E. Barringtoniæ*, *Ic. Pict. Plantarum*, t. 15; but in that the flowers are not, as in this, reversed.

The stem is short and thick. Leaves almost entirely radical, from 6 to 12 inches long, very tough and rigid, oblong, entire. Cluster solitary, on a scaly stalk, simple, consisting of a great number of alternate stalked flowers, of which our plate can admit but a few of the lowermost. From their greenish colour I should expect them to be fragrant at night. The 5 petals are oblong; the 2 lowermost (or in this reversed species the uppermost) forming a pouch, or short spur, round the base of the lip, which itself has no spur. The lip is 3-lobed, concave, green spotted with red. Column crowned by the vertical moveable cap or lid. Capsule obovate.

a is the pouch. *b* lip. *c* column. *d* lid. *e* capsule.

TAB. 10.

DENDROBIUM speciosum.
Great Dendrobium.

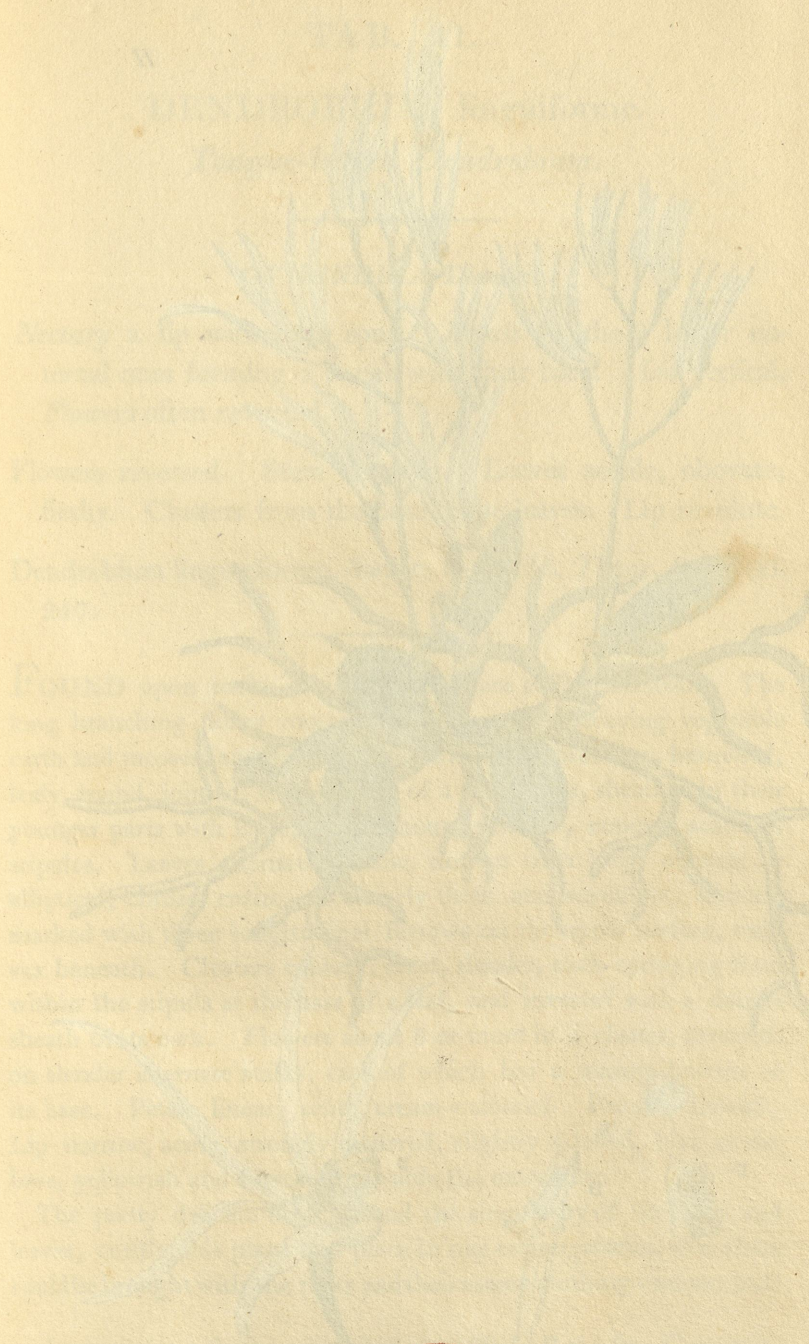
GYMNAEDRIA Diandra.

Flowers reversed. Calyx solitary, many-flowered. Lip
three-lobed. Leaves radical, coriaceous.
Flowers often reversed.
Leaves a lip without a spur. Petals 2, the 2 lower ex-
tending ones forming a pouch with their base. Lid vertical.

GROWS on rocks and trees in New South Wales, where the na-
tives call it *Wag-kah-dah*. It is a fine species of a new genus
formed by Dr. Swartz, with great judgment, out of the *Epiphyllum*
of authors, another species of which is now *E. bartramianum*, L.
Pict. Plantarum, t. 15; but in that the flowers are not as in this,
reversed.

The stem is short and thick. Leaves almost entirely radical,
from 6 to 12 inches long, very tough and rigid, oblong, entire.
Cluster solitary, on a scaly stalk, simple, consisting of a great
number of alternate stalked flowers, of which our plate can admit
but a few of the lowermost. From their greenish colour I should
expect them to be fragrant at night. The petals are oblong; the
2 lowermost (or in this reversed species the uppermost) forming a
pouch, or short spur, round the base of the lip, which itself has no
spur. The lip is 3-lobed, concave, green spotted with red. Column
crowned by the vertical movable cap or lid. Capsule obovate.

a is the pouch. b lip. c column. d lid. e capsule.





Dendrobium linguiforme.
 Feb 11-1806. Published by Jas. Sowerby, London.

TAB. 11.

DENDROBIUM linguiforme.

*Tongue-leaved Dendrobium.**GYNANDRIA Diandria.*

Nectary a lip without a spur. *Petals* 5; the 2 lower external ones forming a pouch with their base. *Lid* vertical. *Flowers* often reversed.

Flowers reversed. Stem creeping. Leaves sessile, obovate, fleshy. Clusters from the base of the leaves. Lip revolute.

Dendrobium linguæforme. Swartz in *Stockh. Trans.* for 1800. 247.

FOUND upon rocks along the sea-shore at Port Jackson. The long branching fleshy roots creep among the decaying vegetable earth and mosses, and fix the stems which are prostrate, branched, leafy, round, jointed, smooth, and of a tawny hue, sheathed in their younger parts with large, membranous, pellucid, concave scales or stipulas. Leaves alternate, sessile, not an inch long, obovate or elliptical, obtuse, entire, excessively thick and succulent, smooth, marked with three longitudinal furrows on the upper surface, convex beneath. Clusters solitary, erect, slender, each springing from within the stipula at the base of a leaf, and invested with a double sheath of its own. Flowers about 6 or more in a cluster, reversed, on slender alternate stalks, each of which has a minute bractea at its base. Petals linear, acute, cream-coloured. Pouch yellowish. Lip narrow, acute, strongly recurved, slightly 3-lobed, blue at the base, yellowish and furrowed towards the extremity.

The pretty delicate flowers, and the singularity of the stem and leaves, entitle this plant to a place in our conservatories, if a stone could be brought with the roots and their mossy clothing undisturbed.

A represents a flower somewhat magnified. B the lip. C germen. D column. E lid. F antheras, or rather masses of pollen.

TAB. II.

DENDROBIUM longistylis.

Tongue-shaped, Dendrobium.

CYMBIDIUM dimidiatum.

Neatly a lip without a spur. Vase at the 2 lower ex-
tremities once forming a pouch with their base. Lip vertical.
Flowers often reversed.

Flowers reversed. Stem creeping. Leaves sessile, obovate.
Fleshy. Clusters from the base of the leaves. Lip revolute.

Dendrobium longistylis, Swartz in J. Bot. Trav. 1: 100.

247

FOUND upon rocks near the entrance of Fort Belknap. The
long pendulous fleshy roots are among the growing vegetable
earth and mosses, and the stems which are branched, branched,
leaves rounded, jointed, smooth, and of a fleshy texture, sheathed in their
younger parts with larger, very smooth, yellowish, concave scales or
perianths. Leaves alternate, sessile, not so much long, obovate or
elliptical, obtuse, entire, extremely thick and succulent, smooth,
marked with three longitudinal furrows on the upper surface, con-
vex beneath. Clusters solitary, erect, slender, each springing from
within the sheath at the base of a leaf, and invested with a double
sheath of its own. Flowers about 6 or more in a cluster, reversed,
on slender staminate stalks, each of which has a minute pedicel at
its base. Petals linear, acute, cream-colored. Lobe yellowish.
Lip narrow, round, strongly curved, slightly lobed, plain at the
base, yellowish and furnished towards the extremity.

The pretty delicate flowers, and the singularity of the stem and
leaves, entitle this plant to a place in our collections. It is a
kindred brought with the roots and the stems, growing underground.

A separate figure, from which engraving, of the lip, of the
column. I. lip. I. and the other names of pollen.





Dendrobium punctatum.

Eden. L. 1805. Published by J. Sowerby, London.

TAB. 12.

DENDROBIUM punctatum.

*Dotted Dendrobium.**GYNANDRIA Diandria.*

Nectary a lip without a spur. *Petals* 5; the 2 lower external ones forming a pouch with their base. *Lid* vertical. *Flowers* often reversed.

Flowers upright. Spike many-flowered. Lip three-lobed, acute, downy. Leaves radical, very short.

DRAWINGS and specimens of this, as well as of the two preceding, were sent us long ago from New South Wales by Dr. White. This is a very elegant species, producing from a small root 4 or 5 stems 2 or 3 feet high, each of which is simple, round, purple, clothed with a few straggling scales only, and terminating in a long and handsome spike of 20 or 30 purple flowers, singular for the red glandular dots which besprinkle their germens, and the specks of a darker purple scattered over their petals and nectary. Each flower stands on a bracteated stalk, and is upright, not reversed or laid on its back as in the two foregoing. The petals are lanceolate, lip 3-lobed, acute, downy above, yellowish at the base, of a darker purple than the petals toward the extremity. The leaves of this plant are little else than a few imbricated acute sheathing scales, at the base of the stem.

A shows the germen magnified. B the lip. C column. D lid. E stigma.

TABLE

DENDROPHYLLOIDES

Dendrophylloides

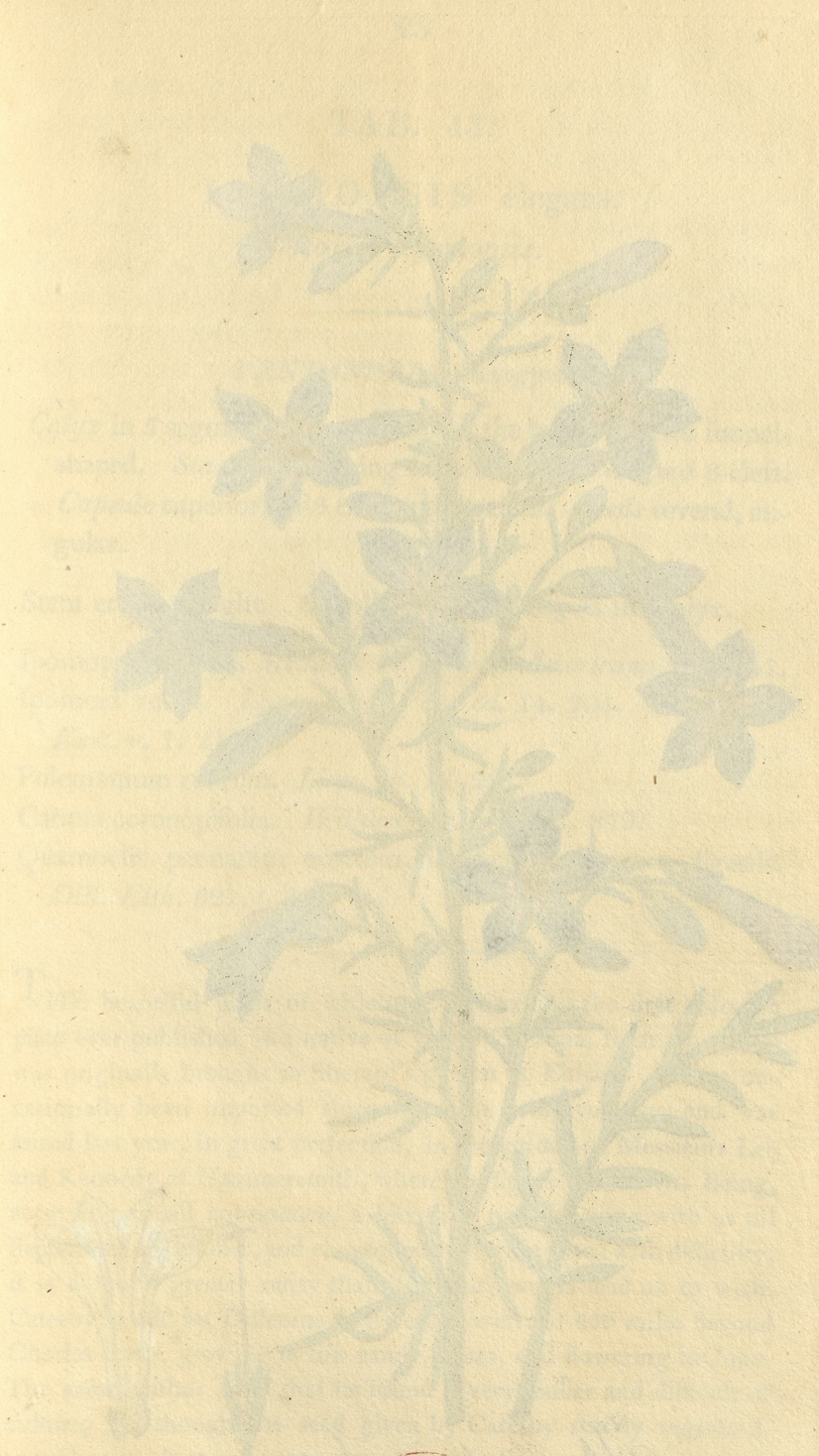
Dendrophylloides

Stem a lip without a spine. The 2 lower ex-
ternal ones forming a smooth, 2-lobed base. A 3-lobed
Flowers often very small.
Flowers upright. Spikes narrow, 2-lobed. Lip 3-lobed,
acute, downy. Flowers small, very small.

DRAWINGS are given of the flowers of the two preceding.
we sent as large as life. The 2nd is by Dr. White. This
is a very elegant species, producing from a small root 4 or 5 stems,
2 or 3 feet high, each of which is simple, round, purple, clothed
with a few spreading scales only, and terminating in a long and
pendulous spike of 20 or 30 purple flowers, brighter for the red
glandular dots which beset the lower segments, and the specks of a
darker purple scattered over their petals and nectary. Each flower
stands on a protracted stalk, and is upright, not twisted or laid on
its back as in the two foregoing. The petals are imbricate, lip 3-
lobed, acute, downy above, yellowish at the base, of a darker purple
than the petals toward the extremity. The leaves of this plant are
little else than a few imbricated acute sheathing scales, at the base
of the stem.

A shows the germin magnified. B the lip. C column. D lid.

E stigma.





Ipomopsis elegans.
Febr. 1865. Published by Jas. Sowerby, London.

TAB. 13.

IPOMOPSIS elegans.

*Scarlet Ipomopsis.**PENTANDRIA Monogynia.*

Calyx in 5 segments, membranous at the base. *Corolla* funnel-shaped. *Stamens* springing from the tube. *Stigma* 3-cleft. *Capsule* superior, of 3 cells and 3 valves. *Seeds* several, angular.

Stem erect, straight. Corolla thrice as long as the calyx.

Ipomopsis elegans. Michaux *Fl. Boreali-Americana*, v. 1. 141.

Ipomœa rubra. Linn. *Syst. Veg.* ed. 14. 204. Ait. *Hort.*

Kew. v. 1. 215.

Polemonium rubrum. Linn. *Sp. Pl.* 231.

Cantua coronopifolia. Willden. *Sp. Pl.* v. 1. 879.

Quamoclit pennatum erectum, floribus in thyrsus digestis.

Dill. Elth. 321. t. 241.

THE beautiful plant of which we here exhibit the first coloured plate ever published, is a native of South Carolina, from whence it was originally brought to Sherard's garden at Eltham. It has occasionally been imported since from the same country, and was raised last year, in great perfection, in the garden of Messieurs Lee and Kennedy at Hammersmith, where our figure was drawn. Being, according to all appearance, a biennial, not flowering with us till September or October, and consequently ripening seed with difficulty, it is a much greater rarity than its beauty would lead us to wish. Catesby is said by Dillenius to have discovered it 250 miles beyond Charles-town, growing in low sandy places, and flowering in June. The same author adds that he found it very tender and difficult of culture, for though the seed given by Catesby readily vegetated, scarcely one plant in twenty came to perfection. It seems to have been formerly in Mr. Lee's collection; for a good drawing of it, by

his late amiable and accomplished sister, is in the possession of the Marquis of Blandford. We have also seen an imitation of this flower in cut paper, of various colours, by the celebrated Mrs. Delany, in the possession of Lady Banks.

About its genus there has been much uncertainty. Linnæus first made it a *Polemonium* and then an *Ipomœa*, but it agrees with neither. The learned Jussieu supposed it might be reduced to his genus of *Cantua*, and has lately again advanced that opinion; but the want of winged seeds, the membranous calyx, and the totally different habit, abundantly justify Michaux in establishing it as a new genus; and we adopt his name, which seems to express the dazzling brilliancy of the flower.

The root is fibrous. Stem solitary, erect, straight and wand-like to the height of 4 or 5 feet, where it becomes paniced: it is round, leafy, clothed like the whole herbage with short glandular white hairs. Leaves pinnatifid, with long narrow linear segments, those of the radical ones being shortest and broadest: the floral leaves are simple. Flowers terminal and lateral, on short stalks, drooping. Calyx bell-shaped, cut above half way down into 5 awl-shaped equal segments, connected by a membrane at their base. Corolla thrice as long as the calyx, funnel-shaped, its border equally 5-cleft, of a brilliant scarlet, elegantly dotted on the inside. Stamens springing from the upper part of the tube, slender, red, shorter than the border. Antheras round, yellow. Germen superior, ovate, obtuse, smooth, pale green. Style red, thread-shaped, about as long as the stamens, with a red, three-cleft, spreading stigma. Capsule almost membranous, of 3 valves and 3 cells, the partitions from the centre of the valves. Seeds several in each cell, in 2 rows, small, acutely angular, not winged.

a is a radical leaf. *b* corolla expanded to show the stamens. *c* calyx with the germen and style.





Spomopsis inconspicua.

Feb^r 1-1805 Published by, Jas^s Sowerby, London.

TAB. 14.

IPOMOPSIS inconspicua.

*Little Blue Ipomopsis.**PENTANDRIA Monogynia.*

Calyx in 5 segments, membranous at the base. *Corolla* funnel-shaped. *Stamens* springing from the tube. *Stigma* 3-cleft. *Capsule* superior, of 3 cells and 3 valves. *Seeds* several, angular.

Stem much branched and spreading. *Corolla* scarcely longer than the calyx. Segments of all the leaves linear.

RAISED in 1793, by Mr. Thomas Hoy, F. L. S. at Sion House, from seed brought, if we mistake not, from America. Mr. Sowerby sketched it in November of that year, and I have never doubted its being distinct from all the genera in Linnæus or Jussieu. It serves indeed to confirm the *Ipomopsis* of Michaux, with which it agrees so completely in every botanical character, that we find it not very easy to establish even a specific difference on sound principles; while on the other hand it shows how different this natural genus is from *Cantua*, and all others to which it has been referred.

The root is annual. Stems numerous, a foot or more in height, much branched, spreading and partly decumbent, leafy, round, clothed with the same pubescence as the foregoing species. Leaves alternate, pinnatifid, the segments all long, narrow, and for the most part simple. Flower-stalks either from the forks of the stem or opposite to the leaves, various in length, simple, solitary or in pairs, erect. Calyx much like the last, but with rather broader teeth. Corolla very little longer than the calyx, blue with a white tube, by no means striking or beautiful. Stamina short, fixed to the top of the tube. Style shortish, with a large 3-cleft purplish stigma. Capsule ovate, thin, whitish, with many angular seeds.

We have a third species, gathered by Dombey at Lima, much like this, but upright; its leaves doubly pinnatifid, with somewhat elliptical lobes, and its flowers whitish.

a is the calyx of *Ipomopsis inconspicua*. *b* corolla. *c* corolla expanded. *D* a magnified stamen. *e* germen and style. *F* magnified stigma. *g* capsule. *h* seeds.

PENTANDRIA Monogamia

Calyx in 5 segments, membranous at the base. Corolla funnel-shaped. Stamens springing from the tube. Stigma 8-lobed. Capsule superior, of 3 cells and 8 valves. Seeds several, angular.

Stem much branched and spreading. Corolla scarcely longer than the calyx. Segments of all the leaves linear.

RAISED in 1793, by Mr. Thomas Lloyd, T. L. S. at Zion House, from seed brought, it was mistaken for *Ipomopsis*. Mr. Sowerby sketched it in November of that year, and I have never doubted its being distinct from all the genera in *Linnæus* or *Jussieu*. It serves indeed to confirm the propriety of the name, with which it agrees so completely in every botanical character, that we find it not very easy to establish even a specific difference on sound principles; while on the other hand it shows how different this natural genus is from *Crotalaria*, and all others to which it has been referred.

The root is annual. Stem numerous, a foot or more in height, much branched, spreading and partly decumbent, leafy, round, clothed with the same pubescence as the foregoing species. Leaves alternate, pinnatifid, the segments all long, narrow, and for the most part simple. Flower stalks arise from the fork of the stem or opposite to the leaves, various in length, simple, solitary or in pairs, erect. Calyx much like the last, but with rather broader teeth. Corolla very little longer than the calyx, blue with a white tube, by no means striking or beautiful. Stamens short, fixed to the top of the tube. Style short, with a large 8-lobed purplish stigma. Capsules are thin whitish, with many angular seeds.





Stratiotes alismoides.
Feb. 1. 1805. Published by Jas. Sowerby, London.

TAB. 15.

STRATIOTES alismoides.

*Broad-leaved Water Soldier.**POLYANDRIA Hexagynia.*

Spatha cloven. *Inner Calyx* superior, in 3 segments. *Petals* 3.

Berry with 6 or more cells.

Leaves broad-ovate, entire. Flowers with eight stamens and eight styles.

Stratiotes alismoides. *Linn. Sp. Pl.* 754. *Mant.* 405.

IT is only of late years that the tropical aquatic plants have been cultivated amongst us with any success. That in the annexed plate was sent from Calcutta by Dr. Roxburgh to Lady Hume, in whose stove it blossomed last autumn. We have not heard of it in any other collection. Like some other water plants with tuberous roots, it may be kept alive for a long while, almost without any moisture; such plants in their native situations being exposed to a variety of changes in that respect, from the drying up or overflowing of the ponds or rivers where they grow.

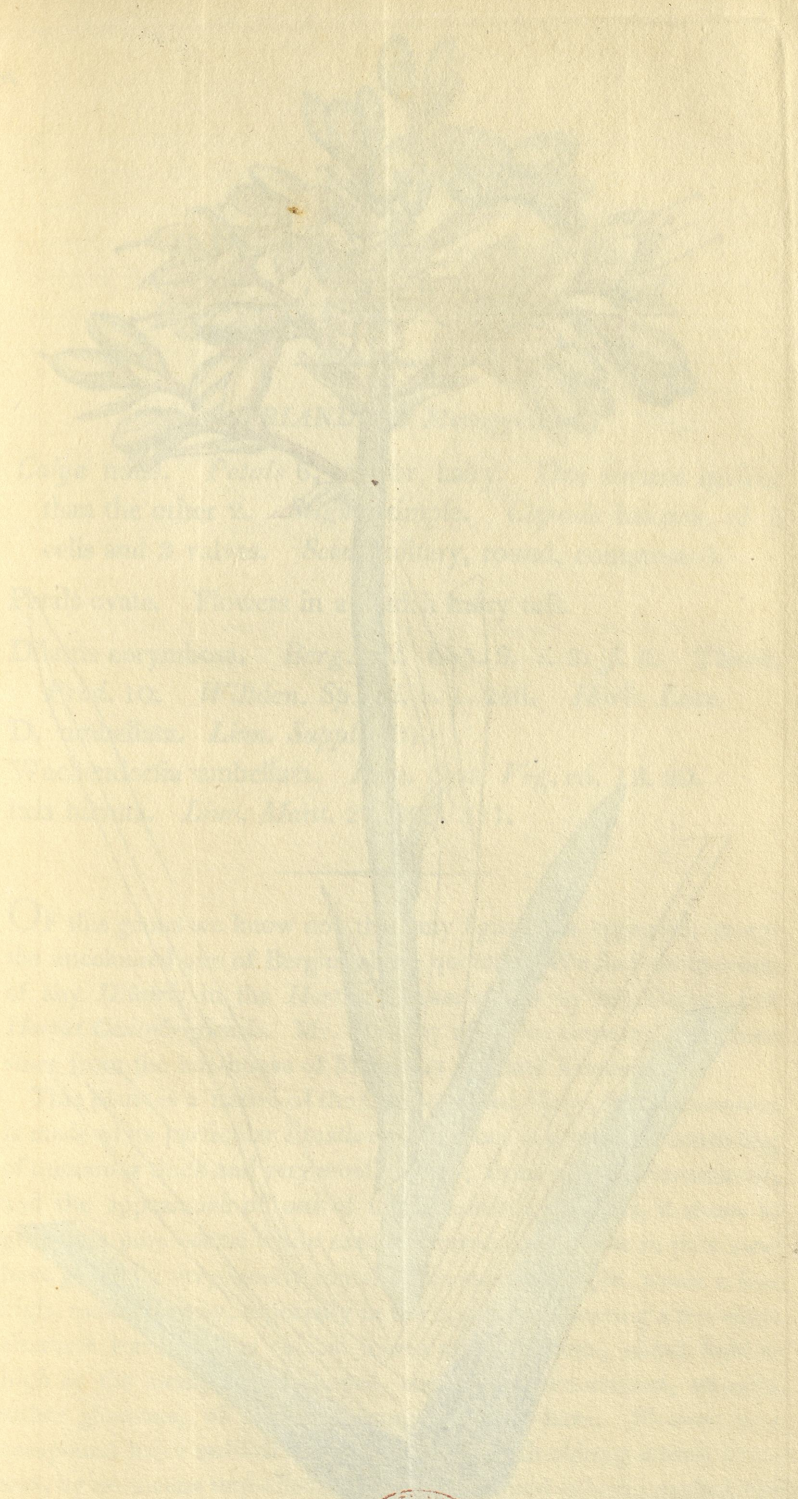
The root is perennial, consisting of a solid knob throwing out innumerable simple fibres. Leaves several, on long foot-stalks, of a very broad ovate or almost heart-shaped figure, bluntly pointed, entire, with many longitudinal ribs and a multitude of transverse veins. Flower-stalks radical, simple, about as long as the leaves, angular, each bearing a solitary white flower of very short duration. The *spatha* is attached to the germen, not of 2 separate leaves as in the other species, but merely cloven at the top into 2 or 3 larger segments, with some small intermediate ones. Its sides are dilated into 2 or 3 (we scarcely find more) longitudinal wings. Proper calyx superior, of 3 deep oblong segments, alternate with the 3 roundish petals. Stamens 8, with vertical linear orange antheras. Styles 8, with cloven linear yellow stigmas. Berry cylindrical, winged, with 8 cells, and numerous elliptical seeds.

Captain Hardwicke has favoured us with a most beautiful detailed drawing of a variety of this plant, with much narrower and perfectly ovate leaves; but there is no reason to suppose it more than a variety. From this we have borrowed the fruit, as well as a stamen and style.

The difference between the spatha of this and our european *Stratiotes aloides*, appears by no means sufficient to make them distinct genera, still less could the differences of number in the parts of fructification authorize such a division.

This species shows the impropriety of removing *Stratiotes* (contrary to Linnæus's repeated observations) to the *Dioecia*. It is to be lamented that some botanists have been so ready to encumber that class, as well as *Monoecia* and *Polygamia*, with plants that have only occasionally one or other of their organs imperfect, as happens now and then in *S. aloides*.

a represents the unripe germen. *b* a petal. *c* a stamen and anthera. *d, d* styles. *e* ripe fruit cut across.





Dilatris corymbosa

March 2. 1865. Published by J. L. Sowerby, London.

TAB. 16.

DILATRIS corymbosa.

*Broad-petalled Dilatris.**TRIANDRIA Monogynia.*

Calyx none. *Petals* 6, regular, hairy. One *stamen* smaller than the other 2. *Stigma* simple. *Capsule* inferior, of 3 cells and 3 valves. *Seeds* solitary, round, compressed.

Petals ovate. *Flowers* in a flattish hairy tuft.

Dilatris corymbosa. Berg. *Pl. Cap.* 9. t. 3. f. 5. *Thunb.*

Prod. 10. *Willden. Sp. Pl.* v. 1. 246. *Herb. Linn.*

D. umbellata. *Linn. Suppl.* 101.

Wachendorfia umbellata. *Linn. Syst. Veg. ed.* 13. 80.

Ixia hirsuta. *Linn. Mant.* 27. 320. 511.

OF this genus we know not that any figure has appeared, except the uncoloured one of Bergius above quoted. We find no mention of any *Dilatris* in the *Hortus Kewensis*, nor in Mr. Donn's rich *Hortus Cantabrigiensis*. Mr. Sowerby made his drawing some time since from the hot-house of Messieurs Lee and Kennedy.

This plant is a native of the Cape of Good Hope, but no mention is made of its particular situation. The root is perennial, consisting of numerous thick and very woolly fibres; from which circumstance, and the appearance of one of the Linnæan specimens, it seems to grow in a pure coarse white sand. Grasses that thrive in pure sand have generally very woolly roots. The stem is simple, about a foot high, round, downy, especially in the upper part, bearing a few short alternate leaves. The radical leaves are numerous, about half as high as the stem, sword-shaped, sheathing, two-ranked, smooth, rather glaucous, of a tawny orange at their base. Flowers in a compound hairy reddish tuft or *corymbus*, with oblong downy bractees, by no means umbelled, so that the original specific name given by Bergius is much the best. *Calyx* entirely wanting. *Petals* ovate, broad, concave, uniform, of a delicate lilac, hairy on the outside,

united at the base, standing on the red round hairy germen. Stamens thread-shaped, spreading, reddish, smooth, all longer than the petals, but one of them is shorter than the other two. Antheras, as far as we have observed, all equal in size, as Linnæus likewise remarks in opposition to Bergius. Style of the form and length of the shorter stamen, with a simple acute stigma. Jussieu describes 3 abortive stamens besides the 3 perfect ones. The fruit of this species we have not seen.

The name *Dilatris*, given by Bergius, from $\delta\iota\varsigma$ and $\lambda\alpha\tau\rho\iota\varsigma$, expressive of two servants or attendants, seems to imply that two of the stamens are imperfect, or of less importance than the third, probably because he found the latter had a larger anthera, but we find all three perfect.

Tab. 16 shows the plant in its natural proportion, with the parts of the flower sufficiently clear in their proper situations.

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Linum trigynum
 March 1. 1805. Published by J. Sowerby. London.

TAB. 17.

LINUM trigynum.

Three-styled Golden Flax.

PENTANDRIA Pentagynia.

Calyx of 5 leaves. *Petals* 5. *Capsule* superior, with 6 or 10 valves, and as many cells. *Seeds* solitary.

Leaves alternate, elliptical, serrated, acute. Styles three. Capsule of six cells.

THIS very handsome species of Flax, remarkable for having only 3 styles, and consequently but 6 cells to the fruit, was observed by Captain Hardwicke on the sides of mountains in Sireenagur, flowering in great profusion and beauty in December. That gentleman has published it, by the apt name of *Linum trigynum*, in his Enumeration of the Plants of Sireenagur, in the Asiatic Annual Register for 1800. From a drawing made on the spot our plate is copied. Nor is the Plant entirely a stranger to our gardens, for it blossomed last December in the stove of the Right Hon. Charles Greville at Paddington. Its provincial name is *Gul Ashorfee*, in allusion to its fine golden colour, from *Gul* a flower, and *Ashorfee* a gold coin current in India, of the value of 2l. sterling.

The stem is shrubby and much branched; branches round, smooth, leafy. Leaves alternate, smooth, dark green, elliptical, obsolete serrated, tipped with a small point, tapering at the base into a shortish foot-stalk. Flower-stalks clustered about the ends of the branches, and accompanied by lanceolate bracteas. Calyx-leaves ovate, acute, entire, ribbed, smooth. Petals obovate, slightly notched, furnished with a small tooth on each side of their claw, and marked with longitudinal veins as usual in the genus. Stamens 5, short, with slight rudiments of 5 others between them. Germen round, depressed. Styles 3, slender, with globular stigmas protruding beyond the stamens. Capsule green and juicy at first, but

brown when dry, generally of 6 cells. Seeds solitary, very thin and soon dried up, so as to be difficult of transportation to any distance. The flowers have little or no scent.

a shows the germen and styles. *b* a section of the unripe capsule.

Three-angled Golden Plan.

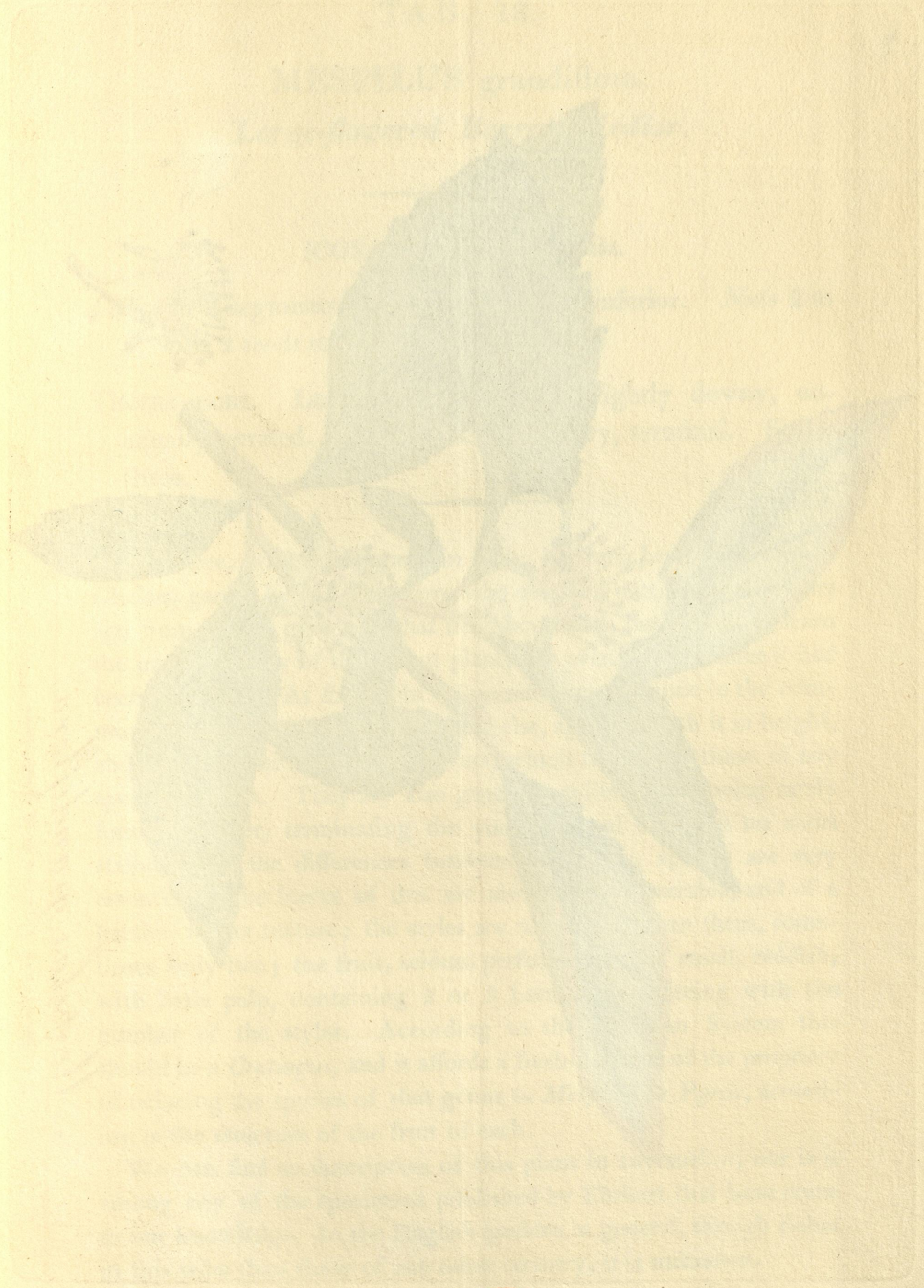
PENTANDRIA Pentagynia.

Calyx of 5 leaves. Petals 5. Capsule superior, with 6 or 10 valves, and as many cells. Seeds solitary.

Leaves alternate, elliptical, serrated, acute. Spikes three. Capsule of six cells.

THIS very handsome species of *Flax*, remarkable for having only 5 styles, and consequently but 6 cells to the fruit, was observed by Captain Hurdwick of the *ships of mountains* in *Siberian*, flowering in great profusion and beauty in December. That gentleman has published it by the name of *Linum trigynum*, in his Enumeration of the Plants of *Siberian* in the *Asiatic Annual Register* for 1800. From a drawing made on the spot our plate is copied. For a long time others a stranger to our gardens, for it blossomed in December in the store of the High Hon. Charles Caville at Padstow. Its provincial name is *Gul d'Arroy*, in allusion to its pale golden colour, from *Gul* a flower, and *Arroy* a gold coin current in India, of the value of 25. sterling.

The stem is slender and much branched; branches round, smooth, hairy. Leaves alternate, smooth, dark green, elliptical, obtuse, serrated, tipped with a small point, tapering at the base into a shortish foot-stalk. Flower-stalks clustered about the ends of the branches, and accompanied by lanceolate bracts. Calyx leaves ovate, acute, cuneate, ribbed, smooth. Petals ovate, slightly notched, furnished with a small tooth on each side of their base, and marked with longitudinal veins as usual in the genus. Corolla 5, short, with slight rudiments of a stamen between them. Corolla round, 5-lobed. Styles 5, slender, with globose stigmas, growing beyond the anthers. < The fruit green and juicy at first, but





Mespilus grandiflora.

March 1. 1806. Engraved by Jas. Smee, London.

TAB. 18.

MESPILUS grandiflora.
Large-flowered Barren Medlar.

ICOSANDRIA Pentagynia.

Calyx in 5 segments. *Petals* 5. *Drupe* inferior. *Nuts* 2 to 5, with 2 seeds each.

Thorns none. Leaves elliptic-oblong, slightly downy, unequally serrated. Flowers nearly solitary, terminal. Styles three.

THIS tree, which blossoms in May, has long been cultivated in Chelsea garden by Mr. Fairbairn, who obtained cuttings many years ago from a small garden in that neighbourhood, but could not learn the native country of the parent plant, nor even from whence it had been procured. At first sight it has more resemblance to the common *M. germanica* than to any thing else, agreeing with it in height, and nearly in the size of the flowers, which far exceed those of any species besides. They are also generally solitary, two being rarely found together, terminating the young lateral branches on short stalks. But the differences between these two species are very essential. The leaves of this are always much serrated, and of a harsher firmer texture; the styles are never more than three, sometimes only two; the fruit, seldom perfected here, is small, reddish, with little pulp, containing 2 or 3 hard seeds agreeing with the number of the styles. According to the Linnæan System this should be a *Cratægus*, and it affords a fresh instance of the propriety of reducing the species of that genus to *Mespilus* or *Pyrus*, according to the structure of the fruit of each.

We can find no description of this plant in any author, nor is it among any of the specimens published by Ehrhart that have come to our knowledge. In the English gardens in general, though richer in this tribe than those of any other country, it is unknown.

a perpendicular section of the calyx and germen, with stamens and styles. *b* a petal.

TAB. 18.

MESPILES grandiflora.
Large-flowered Bayberry.

ICOSPITULA Fungorum.

Calyx in 5 segments. Petals 5. D. of inferior. Vitis 2 to 3.
A. with 2 seeds each.
Thorns none. Leaves elliptic-oblong, slightly downy, un-
equally serrated. Flowers nearly solitary, terminal. Siliques
three.

This tree, which abounds in Mass. has long been considered as
Chalica garden by the Indians as no distinct variety is known
ago from a small garden in that neighborhood, but which is now
the native country of the present plant, not even from a distance it had
been recognized. At first sight it has more resemblance to the com-
mon M. americana than to any other close ally, not with it in height,
and nearly in the size of the flowers, which in several those of any
species besides. They are also generally solitary, the being rarely
found together, terminating the young fruit and branches on short
stalks. But the difference between them and the species are very
essential. The leaves of this are almost entirely serrated, and of a
harsher inner texture; the styles are more than three, some-
times only two; the fruit, which is pointed, is small, reddish,
with little pulp, containing 2 or 3 hard seeds agreeing with the
number of the styles. According to the European System this
should be a Crataegus, and a species of that genus of the propriety
of reducing the species of that genus to M. rubra or Vitis, accord-
ing to the structure of the fruit of each.
We can find no description of this plant in any author; not is it
among any of the species published by Engelm. that has come
to our knowledge. In the English gardens, however, though not
in this time has been seen, it is common.

a perpendicular series of the style and stigma, with constant
and styles. A petal.

r.

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eds with a

rs terminal,

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ne conveyed
it *undulata*
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Cavanilles,
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Bignonia undulata.
March 1. 1806. Published by Jas. Sowerby London.

TAB. 19.

BIGNONIA undulata.

Wave-leaved Orange Trumpet-flower.

DIDYNAMIA Angiospermia.

Calyx cup-shaped, 5-cleft. *Corolla* 5-cleft, with a bell-shaped tube, swelling beneath. *Pod* of 2 cells. *Seeds* with a membranous wing.

Leaves simple, lanceolate, waved, entire. Flowers terminal, umbellate. Stem erect.

CAPTAIN HARDWICKE discovered this noble species of *Bignonia* in the northern forests of Hindustan, from whence he conveyed living plants to the botanic garden at Calcutta, naming it *undulata* from the appearance of the leaves. It grows to a large tree, flowering in March and April, and ripening seeds in May. The provincial name *Suna Mookee* means golden-mouthed.

It appears to be entirely nondescript, as far as we have been able to discover, and should stand near the *B. linearis* of Cavanilles, *Ic. v. 3. 35. t. 269*, from which it is distinguished by its greater size, broader undulated leaves, and orange, not rose-coloured, flowers, whose lobes are flat, not crisped or waved. The leaves are numerous, scattered, on slender stalks, acute, entire, smooth. Flowers in terminal simple umbels, accompanied by small lanceolate bracteas. *Calyx* slightly downy, in 5 shallow segments. *Corolla* large, short and spreading. Stamens 4, with an abortive twisted filament besides. *Pod* a foot long, linear, acute, smooth.

a, a are pieces of the partition of the pod. *b* a portion of the same with seeds in their places. *c* a seed.

TAB. 19.

BIGNONIA undulata.

Wine-leaved Orange Trumpet-flower.

DIDYMANIA angustata.

Calyx cup-shaped, 5-lobed. Corolla 5-lobed, with a bell-shaped
invol. swelling beneath. Pod of 2 cells. Seeds with a
membranous wing.

Leaves simple, lanceolate, waved, entire. Flowers terminal.
umbellate. Stem erect.

CAPTAIN HARDWICK discovered this noble species of Bigno-
nia in the northern forests of Hindustan, from whence he conveyed
living plants to the botanic garden at Calcutta, naming it undulata
from the appearance of the leaves. It grows to a large tree, flower-
ing in March and April, and ripening seeds in May. The por-
tuguese name *Árvore d'ouro* means golden-mounted.

It appears to be entirely monospermy, as far as we have been able
to discover, and should stand near the *B. laevis* of Cavendish,
to which it is distinguished by its greater
size, broader undulated leaves, and orange, not rose-coloured,
flowers, whose lobes are flat, not craped or waved. The leaves are
membranous, serrated, on slender stalks, entire, smooth.
Flowers in terminal simple umbels, accompanied by small lanceo-
late bracts. Calyx slightly downy, in a shallow segment. Co-
rolla large, short and spreading. Stamens 4, with an adnate
twisted filamentous beard. Pod a foot long, lustrous, acute, smooth.

As the seeds of the partition of the pod, & a portion of the
seed with seeds in their places. - a seed.





Tetratheca ericifolia.

March 1. 1808. Published by J. Sowerby London.

TAB. 20.

TETRATHECA ericifolia.

*Heath-leaved Tetratheca.**OCTANDRIA Monogynia.*

Calyx 4-cleft, inferior. *Petals* 4. *Antheras* with 4 cells.

Capsule of 2 cells and 2 valves, with the partition from their middle. *Seeds* about 2 in each cell.

Leaves whorled, linear, revolute, minutely toothed. Stem rough with ascending bristles. Flower-stalks and calyx very smooth.

ONE species only of this genus has been made known to botanists, *T. juncea*, *Bot. of New Holland*, tab. 2, *Willden. Sp. Pl. v. 2.* 321. The character of the 4-celled antheras, opening by pores at the end of a tubular point, is very peculiar. This structure indicates an affinity to the *Ericæ*, but they have only 2 cells.

The root of *T. ericifolia* is somewhat woody, and probably perennial, for some of our specimens have evidently been burnt to the ground in consequence of the fires made by the savages of New South Wales, its native country, and have grown up again. The stems are several, a span high, simple or branched, leafy, round, clothed with small upright bristles. Leaves 4 or 5 in a whorl, sessile, short, linear, revolute, their edges, and sometimes their upper surface near the point, rough with minute teeth. Flower-stalks axillary, solitary, simple, single-flowered, longer than the leaves, curved, quite smooth, round and naked. Flowers drooping. Calyx smooth, obtuse. Petals obovate, rose-coloured, occasionally white. Antheras oblong, smooth, purplish brown, all equal, with whitish tips. Germen superior. Style and stigma simple. Capsule pendulous, ovate, acute, compressed, of 2 flattish valves, with a contrary partition running down their middle. Seeds mostly 2 in each cell, oblong, compressed, on short stalks.

A a magnified petal. B flower-stalk, calyx, germen and style with 1 stamen remaining. C anthera cut across. D capsule. E seed.

TAB. 20.

TETRATHECA

Health-leaved Tetratheca

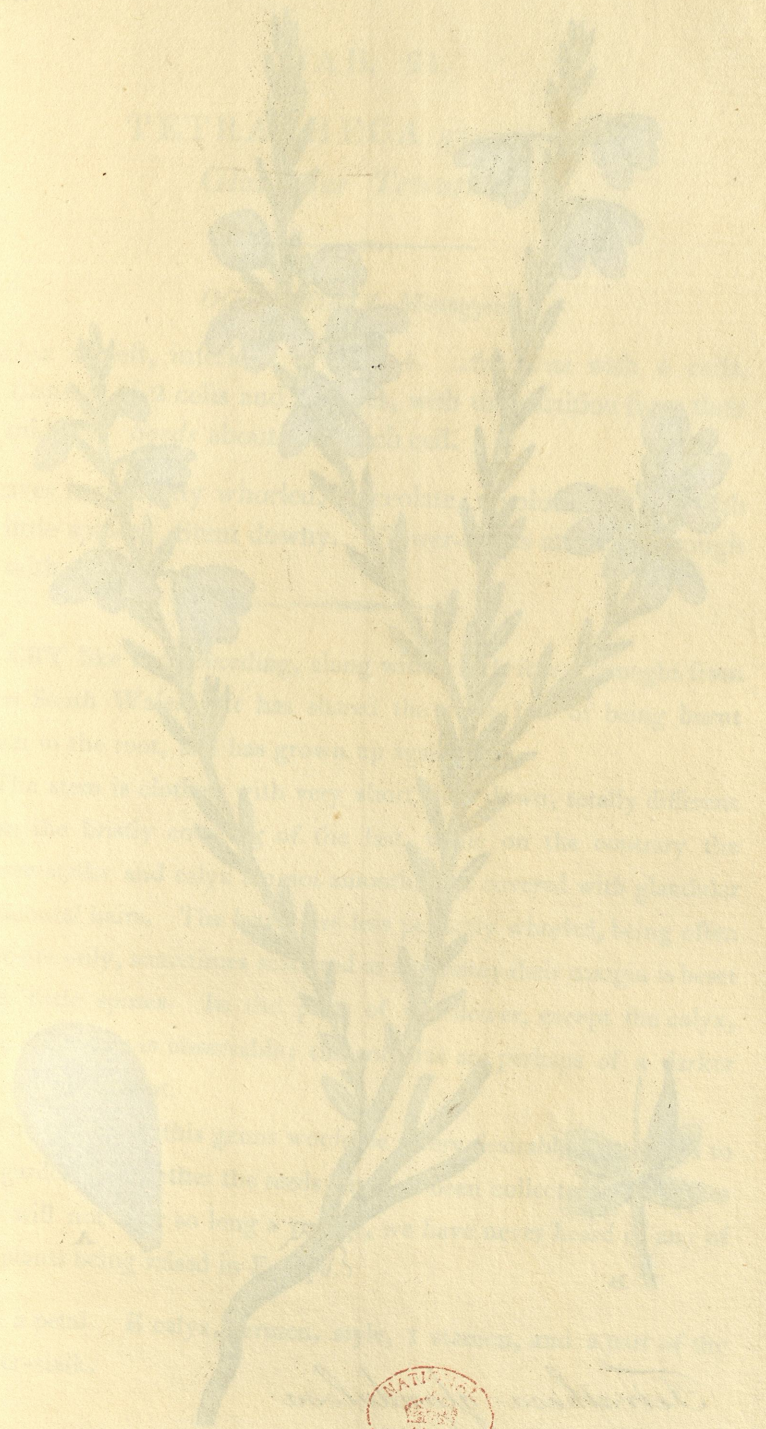
OCTANDRIA Monogynia

Corolla 4-lobed, inferior. Petals 4. Anthers with 4 cells.
 Capsule of 2 cells and 2 valves, with the partition from their
 middle. Seed about 2 in each cell.
 Leaves whorled, linear, revolute, minutely toothed. Stem rough
 with ascending pilosity. Flower stalks and calyx very smooth.

ONE species only of this genus has been made known to botanists,
T. juncea, Bot. of New Holland, tab. 2, p. 231. The character of the
 capsule of the 4-celled capsule, opening by pores at the end
 of a tubular point is very peculiar. This structure indicates an af-
 finity to the *Forster*, but they have only 2 cells.
 The root of *T. juncea* is somewhat woody, and probably peren-
 nial, for some of our specimens have certainly been found to the
 ground in consequence of the fact that the leaves of New
 South Wales, its native country, and have grown up again. The
 stems are several, a few high, simple or branched, leafy, round,
 clothed with small upright bristles. Leaves 4 or 5 in a whorl,
 sessile, short, linear, revolute, their edges, and sometimes their
 upper surface near the point, rough with minute teeth. Flower
 stalks solitary, sessile, simple, single flowered, longer than the
 leaves, curved, quite smooth, round and naked. Leaves smooth,
 only smooth entire. Petals 4, very unequal, occasionally
 which 4-lobed entire, linear, somewhat broader, all equal, with
 which tips. Germen superior, 2-celled and 2-valved. Capsule
 perianth, ovary, round, composed of 2 distinct lobes, with a
 central partition running down the middle. Seeds mostly 2 in
 each cell, oblong, compressed, on short stalks.

A magnified part. B flower stalk with calyx and style.
 with 4 stamens remaining. C capsule with seeds. D capsule
 filled.

1882





Tetratheca glandulosa

March 1, 1865. Published by T. & A. Sowerby, London.

TAB. 21.

TETRATHECA glandulosa.

Glandular Tetratheca.

OCTANDRIA Monogynia.

Calyx 4-cleft, inferior. *Petals* 4. *Antheras* with 4 cells.
Capsule of 2 cells and 2 valves, with the partition from their middle. *Seeds* about 2 in each cell.

Leaves imperfectly whorled, lanceolate, revolute, toothed with little spines. Stem downy. Flower-stalks and calyx rough with glands.

VERY like the preceding, along with which it was brought from New South Wales. It has shared the same fate of being burnt down to the root, and has grown up again.

The stem is clothed with very short close down, totally different from the bristly covering of the last, while on the contrary the flower-stalks and calyx are not smooth, but covered with glandular horizontal hairs. The leaves are less perfectly whorled, being often opposite only, sometimes scattered or alternate; their margin is beset with little spines. In the parts of the flower, except the calyx, little difference is observable; the antheras are perhaps of a darker colour throughout.

The species of this genus would be a very desirable acquisition to the gardens. Whether the seeds have not been collected, or whether they will not bear so long a voyage, we have never heard of any of the plants being raised in Europe.

A a petal. B calyx, germen, style, 1 stamen, and a part of the flower-stalk.

TETRAETHICA glandulosa.

Glandular Tetraethica.

OCCURRENCE Monogynous.

Calyx 4-lobed, inferior, 1-2 lobes, 4-5 anthers with 4 cells.
Corolla of 3 cells and 2 lobes, with the partition from their
middle, each about 2 in each cell.

Lower immovably whorled, intermediate, rounded with
flattened stem downy. Flower stalks and calyx rough
with glands.

VERY like the preceding, being with which it was brought from
New South Wales. It has shared the same fate of being burnt
down to the root, and has grown up again.
The stem is capped with very short down, totally different
from the bushy covering of the last, while on the contrary the
flower stalks and calyx are not smooth, but covered with glandular
horizontal hairs. The lower stem has partially whorled, being often
opposite only, sometimes scattered or alternate; their margin is erect
with little spines. In the parts of the flower except the calyx,
little differences observable; the anthers are perhaps of a darker
color than usual.

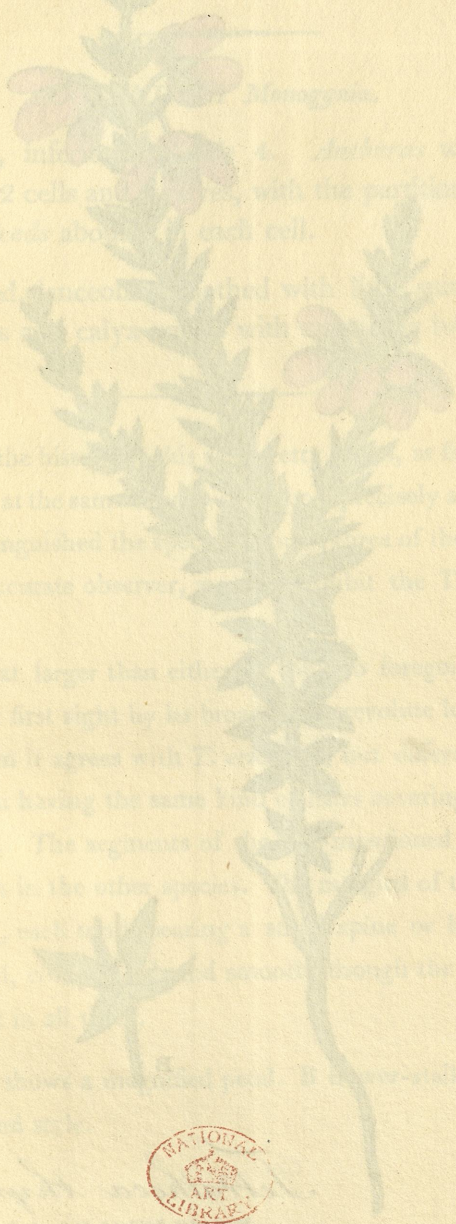
The species of this genus would be a very desirable acquisition to
the garden. Whether the seeds have been collected, or whether
they will not bear so long a voyage, we have never heard of any of
the plants being raised in England.

A small 11 calyx, remaining whole, 1 staminal, and a part of the
flower-stalk.

PLATE 12

TETRAELOEA thymoides.

Thymoid Tetraelea.



Leaves whorled, succulent, marked with white spots. Flowers
 Capsule of 2 cells and 2 seeds, with the portion from the
 middle. Seeds about 1/16 inch long.

Leaves whorled, succulent, marked with white spots. Flowers
 flower stalks 1/2 inch long, with 1/2 inch long.

To complete the illustration of this species, as far as known
 discovered, and at the same time to show the growth and curious
 structure distinguished the species from others of the same
 family to an unaccustomed observer, the following description of Tetraelea
 thymoides.

It is somewhat larger than other species of the same family, and
 is recognizable at first sight by its long, narrow, pointed leaves. The
 shape of the stem agrees with that of the other species of the same
 family, according to having the same kind of growth, the flowers
 stalks 1/2 inch long. The segments of the stem are not as
 much as in the other species. The leaves are
 highly succulent, and the flowers are small and tubular. The
 capsule is small, and the seeds are small and round.

FIG. 12. A shows a flowering branch of Tetraelea thymoides, and B shows
 a single fruit and seed.





Tetratheca thymifolia

March 1. 1806. Published by J. G. Sowerby, London.

TAB. 22.

TETRATHECA thymifolia.

*Thyme-leaved Tetratheca.**OCTANDRIA Monogynia.*

Calyx 4-cleft, inferior. *Petals* 4. *Antheras* with 4 cells.
Capsule of 2 cells and 2 valves, with the partition from their
 middle. *Seeds* about 2 in each cell.

Leaves whorled, lanceolate, toothed with little spines. Stem,
 flower-stalks and calyx rough with ascending bristles.

To complete the history of this very pretty genus, as far as hitherto discovered, and at the same time to show how precisely and curiously Nature has distinguished the species, though three of them are much alike, to an inaccurate observer, we here exhibit the Thyme-leaved Tetratheca.

It is somewhat larger than either of the two foregoing, and distinguishable at first sight by its broader less revolute leaves. In the hairs of the stem it agrees with *T. ericifolia*, but differs from both the preceding in having the same kind of hairs covering the flower-stalk and calyx. The segments of the last-mentioned part are also more acute than in the other species. The margins of the leaves are slightly toothed, each tooth bearing a small spine or bristle. The germen is round, compressed, and smooth, though the receptacle is hairy we believe in all three.

Tab. 22. A shows a magnified petal. B flower-stalk, calyx, stamens, germen and style.

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Mirabilis longiflora

April 1. 1805. Published by J. S. Sowerby, London.

TAB. 23.

MIRABILIS longiflora.

Long-flowered Marvel of Peru.

PENTANDRIA Monogynia.

Calyx inferior, 5-cleft. *Corolla* funnel-shaped; its base inflated and permanent. *Nectary* a gland surrounding the germen. *Nut* solitary, with 1 seed.

Flowers clustered, terminal, very long, slightly drooping.

Leaves downy.

Mirabilis longiflora. Linn. *Sp. Pl.* 252. *Act. Holm. ann.*

1755. 176. *t.* 6. *Amœn. Acad.* v. 4. 268. *Willden.*

Sp. Pl. v. 1. 999. *Ait. H. Kew.* v. 1. 235.

Atzoyatl, *Mirabili Mexicana.* *Hernand. Mex.* 170.

IT is strange that no coloured figure of this elegant flower has ever been published, more especially as its history is interesting, and its beauty and fragrance render it highly worthy of general notice.

The celebrated Monsieur le Monnier seems to have introduced it to the knowledge of European botanists about the middle of the last century, having probably procured its seeds from some of his astronomical friends who went to South America; and from him, through the hands of Baron Munckhausen, they came to Linnæus, who was so pleased with the plant, that he honoured it with a particular account and description, accompanied by a splendid figure, in the Stockholm Transactions for 1755. Miller had it in the Chelsea garden in 1759, as appears from his dictionary, and it is still cultivated there in profusion, though not so general in gardens as some others of the genus. If the synonym of Hernandez really belongs to it, which his bad figure renders somewhat doubtful, we learn from him that it grows wild in the colder and mountainous parts of Mexico, flowering in September.

In our gardens, if raised on a hot bed, like the tender kinds of annuals, in the spring, it flowers abundantly in autumn. It will

even sow itself spontaneously, and, in favourable seasons, come up in the open border; but such plants bloom very late, and scarcely perfect seed. The best method is to take up the roots at the first frosts, preserve them in dry sand through the winter, and plant them in April or May. They will by this method produce luxuriant plants year after year, and flower much earlier than by the former method. The flowers expand in the evening, and last only one night; but there is a copious succession of them throughout the autumn, and if gathered just above the calyx, a few of them in water will powerfully perfume a large apartment.

Linnaeus in a manuscript note now before me has the following remark: "The pollen of this plant is very large, globular, yellow, hanging by a little thread, and neither falling off nor bursting, but wasting away; for the corolla when closed presses it to the stigma, while the *papillæ* of the latter attach themselves each to a particle of the pollen, and imbibe it." This is somewhat analogous to the *Orchis* tribe, and may possibly help to explain the impregnation of plants under water, where there can be no explosion of the pollen as in a dry atmosphere.

The root of the *Mirabilis longiflora* is large and fleshy. Stem 3 or 4 feet high, repeatedly forked, spreading, round, downy, leafy. Leaves opposite, heart-shaped, entire, soft, downy and viscid; the lower ones on foot-stalks; the rest sessile. Flowers many together, sessile at the top of each branch, downy and viscid externally. Calyx bell-shaped, acute, very clammy and foetid. Tube 4 inches long, purplish. Limb white, plaited and notched, with 5 green external folds, the orifice of a beautiful purple. Stamens and style like long silky threads. Stigma large, formed of a globular tuft of hairs. One large tessellated nut or seed, farinaceous within, succeeds each flower. The corolla is really inferior, but its permanent base, becoming hard and attached to the seed, gives it, in an advanced state, the appearance of being superior, as Linnaeus describes it.

The natural order of this genus is not easily determined. The learned Jussieu notes its affinity in some points to the *Amaranthus* tribe, and has been induced to call the corolla an inner calyx; which seems paradoxical, chiefly because there is a true calyx besides. In structure the part in question is more like a calyx than that of the *Polygonum*, and the farinaceous seed betrays an affinity to that genus as well as to the *Amaranthi*, rather than to the *Dipsacæ*.

a is a ripe seed. *b* a section of the same.



Hamellia patens

April 1863. Published by T. S. Sowerby, London.

TAB. 24.

HAMELLIA patens.

Spreading Scarlet Hamellia.

PENTANDRIA Monogynia.

Corolla tubular, 5-cleft. *Berry* inferior, with 5 cells and many seeds.

Clusters of flowers terminal, downy. Leaves three together, soft and downy, especially beneath.

Hamellia patens. Jacq. *Amer.* 72. t. 50. *Linn. Sp. Pl.* 246.

Willden. Sp. Pl. v. 1. 980. *Swartz. Obs.* 77. *Lamarck.*

Encycl. 68.

H. coccinea. *Swartz. Prod.* 46.

Periclymenum aliud arborescens, ramulis inflexis, flore corallino. *Plum. Ic.* 212. t. 218. f. 2.

DRAWN from a very fine plant of this species, brought from Jamaica, which flowered abundantly in Lady Hume's stove in October 1796. It is not mentioned in the *Hortus Kewensis*, nor is it to be found in many collections, though the younger Linnæus had a specimen from the royal garden at Paris in 1781. It is one of the two originally supposed species of the genus, named by Jacquin after Du Hamel, an excellent French writer on the structure and œconomy of plants; but the other, *H. erecta* of Jacquin, is now unanimously presumed to be a variety only. Dr. Swartz and other botanists have since made us acquainted with several new species.

The stem is shrubby, about 4 feet high, with round spreading leafy branches, downy when young. Leaves standing 3 together, on red downy foot-stalks, simple, elliptical, entire, tapering at each end, soft and pliable, slightly downy above, more so, as well as lighter coloured, beneath. The veins are numerous and parallel, reddish like the midrib and margin, above. Swartz has sometimes seen 4 or 5 leaves in a whorl. A pair of tapering stipulas stand

between each foot-stalk and the branch, as in all this natural order of *Rubiaceæ*. A compound cluster of flowers terminates each branch, the stalks of which are red, downy, and placed three together, each forked, and bearing many sessile scarlet flowers, in 2 rows, with a solitary one between them. Calyx of 5 small teeth crowning the germen. Corolla superior, cylindrical, with 5 furrows, an inch long, scarlet, 5-cleft at the orifice. Stamens connected with its base, equal, linear, smooth. Antheras vertical, linear, yellow. Germen inferior, globular, downy, red. Style the length of the stamens, bearing a club-shaped obtuse stigma. Berry black, crowned with the calyx.

Jacquin and Swartz both gathered this shrub on the bushy sides of mountains in Hispaniola, now more generally called St. Domingo. It thrives well in the bark bed of a stove, flowering for some weeks late in autumn.

a shows the germen and style. *b* germen cut across. *c* corolla opened laterally. *d* stamens.





Dillwynia ericifolia

April 1. 1808. Published by T. Sowerby, London.

TAB. 25.

DILLWYNIA ericifolia.

Heath-leaved Dillwynia.

DECANDRIA Monogynia.

Calyx simple, 5-cleft, 2-lipped. *Corolla* papilionaceous.
Style reflexed. *Stigma* obtuse, downy. *Pod* inflated, of
 1 cell, with 2 seeds.

Leaves rough with minute points. Flowers at the ends of the
 branches.

Dillwynia ericifolia. *Smith in Annals of Bot. v. 1. 510.*

SEEDS of this shrub were among the first brought from New South Wales, and plants have been raised by many cultivators about London. Our drawing was made so long ago as April 1795, from a specimen produced under the care of Mr. Hughes at Stockwell. No figure of the plant has yet appeared, nor has its genus, of which we now know 3 species, been settled till very lately. It takes its name from Mr. Lewis Weston Dillwyn, F. L. S., author of an excellent periodical work on the *Conservæ*.

The stem is shrubby, much branched, spreading; the branches rigid, leafy, downy. Leaves scattered, spreading, on short foot-stalks, narrow, linear, acute, entire, revolute, twisted so that the under side, which is convex, and rough all over with minute points, is turned uppermost; the other side is channelled. Mr. Sowerby has observed a minute red glandular appearance on each side of the foot-stalk at the base, looking like stipulas, but we can find no traces of such in the dried plant. The flower-stalks are clustered about the summits of the branches, each having a pair of concave bracteas, and bearing one flower. Calyx bell-shaped, smooth, without appendages, angular, its 2 upper segments larger than the rest and divaricated, forming the upper lip; the lower lip is of 3 equal segments. Standard very peculiar, almost of a kidney shape, being

very broad and short; its colour is a full yellow with a central stain of crimson; the claw is greenish. Wings and keel both toothed on the upper side near the base, variegated with purple and yellow. Stamens 10, all separate, equal and awl-shaped. Anthers yellow, round. Germen oblong, hairy. Style bent upwards, thick and short, crowned with a blunt, or capitate, downy stigma. Pod ovate, swelling, black, hairy towards the point, of one cell, mostly containing 2 seeds which occupy but a small part of the cavity.

The short reflexed style, and, above all, the blunt downy stigma, distinguish this genus from the other papilionaceous plants with 10 separate stamens. See *Annals of Botany* above quoted.

A leaf magnified. B stipulas? c calyx. d standard. e a wing. f keel. g, G stamens. h germen and style. I style and stigma magnified. k pod. l seed.





Dillwynia floribunda

May 2. 1805. Published by Jas. Sowerby, London.

TAB. 26.

DILLWYNIA floribunda.

*Close-flowered Dillwynia.**DECANDRIA Monogynia.*

Calyx simple, 5-cleft, 2-lipped. *Corolla* papilionaceous.
Style reflexed. *Stigma* obtuse, downy. *Pod* inflated,
 of 1 cell, with 2 seeds.

Leaves rough with tubercles. Flowers lateral, axillary.

Dillwynia floribunda. *Smith in Annals of Bot. v. 1. 510.*

DRAWN some years since from the collection of the late Benjamin Robinson Esq. of Stockwell. It is, like the foregoing, a native of New South Wales, growing in dry sandy soil, and flowering with us in spring or summer, requiring a greenhouse, and rather dry treatment.

Stem 5 or 6 feet high, shrubby, branched; the branches ascending, round, hairy, thickly clothed with leaves placed without order, and less spreading than in *D. ericifolia*. The leaves are also somewhat broader than in that species, rough with coarser tubercles, and often hairy. We find no traces of stipulas. The flowers are not terminal, but grow in great numbers along the branches, each simple flower-stalk, with a pair of bracteas, springing solitary from the bosom of a leaf. The calyx resembles the last. The corolla is yellow, with less vivid crimson stains, and its standard is not quite so short and broad. Pod very hairy.

a calyx, flower-stalk and bracteas. *b* standard. *c* one of the wings. *d* keel. *e* stamens. *f*, *F* germen, style and stigma.

TAB. 66.

DILWYNIA. Bonobada.

Close-Rowed Dilwynia.

DECAEDRIA. Manoyria.

Only single, 5-lobed, 2-lipped. Corolla papilionaceous.
Style twisted. Stamens oblong. Pod jointed
of 1 cell with 8 seeds.

Leaves rough with under a. Flowers in axillary
Dilwynia Bonobada. Bonobada in Bonobada.

DRAWN some years since from the collection of the late
James Robinson Esq. of Stockport. It is the foreword, a
native of New South Wales, growing in a rocky soil, and flowering
with us in spring or summer, requiring a greenhouse, and rather
dry treatment.
Stems 3 or 4 feet high, slender, but hard, the branches aced-
ing round, hairy, thickly clothed with leaves placed without order,
and less spreading than in D. exaltata. The leaves are also
somewhat broader than in that species, with coarser tubercles,
and often hairy. We find no traces of flowers. The flowers are
not terminal, but grow in great numbers along the branches, each
single flower stalk, with a pair of bracts, arising solitary from
the bottom of a leaf. The calyx resembles the last. The corolla
yellow, with less vivid crimson stain, and its standard is not quite
coherent and throat. Pod very hairy.

a calyx, longer stalk and bracts. A standard, a one of the
wings, a keel, a stamens. A. P. growing, and a stigma.

s. *Stigma*
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l. 507.

6.

Cant. 76.

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Viminaria denudata

May 1. 1805. Published by J. E. Sowerby, London.

TAB. 27.

VIMINARIA denudata.

Leafless Rush-Broom.

DECANDRIA Monogynia.

Calyx angular, simple, 5-cleft. *Corolla* papilionaceous. *Stigma* simple, acute. *Pod* leathery, of 1 valve, not bursting, entirely filled with a single seed.

Viminaria denudata. *Smith in Annals of Bot.* v. 1. 507.

Daviesia denudata. *Ventenat Choix de Plantes*, t. 6.

Sophora juncea. *Schrad. Sert. Hannov.* 9. t. 3.

Pultenæa juncea. *Willden. Sp. Pl.* v. 2. 506. *Donn. Cant.* 76.

THIS remarkable shrub we also obtained from the collection at Stockwell in July 1794, when it was in full flower. The seeds came from Port Jackson very soon after the settlement of that colony, and were dispersed through the gardens of Europe, where they have generally succeeded, and yet the plant is not now common in green-houses, perhaps from its being more singular than ornamental. Dr. Schrader figured it long ago as a *Sophora*, the genera of this tribe not being then understood. Monsieur Ventenat, in his new uncoloured work called *Choix de Plantes*, has reduced it to my genus of *Daviesia*, not being well acquainted with the pod, which decidedly establishes it as a new genus, and this its whole aspect confirms. The name alludes to the peculiar habit, being derived from *vimen* a pliant slender twig, which meaning we have attempted to retain in the English denomination.

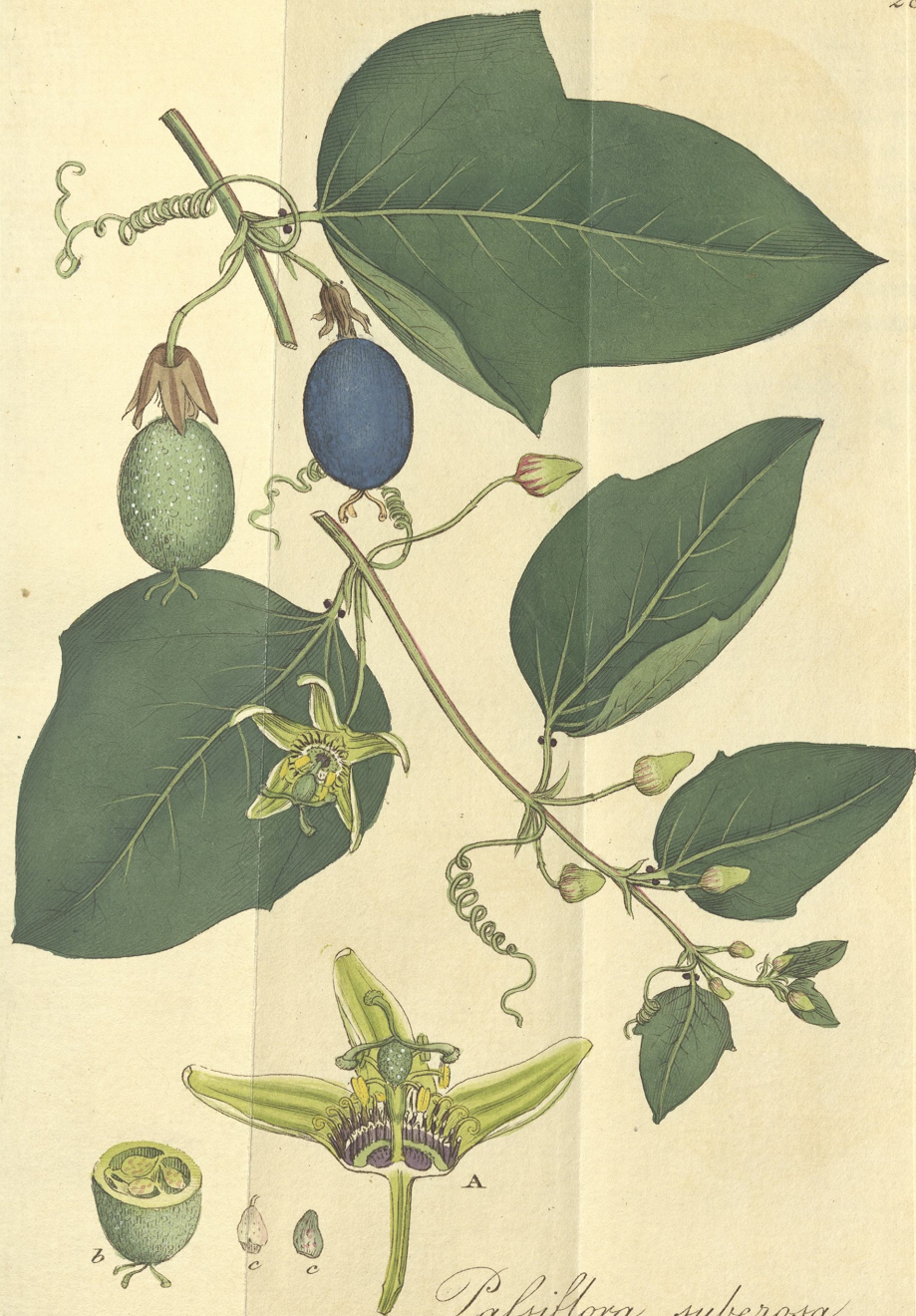
The stem is branched and shrubby, round and smooth. Leaves only to be found on the lower part of seedlings or young plants, alternate, on long stalks, ovate, entire, three-nerved, smooth, the first sometimes ternate. The foot-stalks on the greater part of the plant bear no leaves, but are very long and slender, cylindrical, smooth, a little notched at the point, looking like a profusion of

naked rushy twigs, and giving a very peculiar aspect to the plant; the upper ones are gradually shorter.

Flowers yellow variegated with red, in long, simple, terminal clusters, on simple alternate stalks, each of which has a small bractea at its base. Calyx bell-shaped, angular, with 5 shallow teeth. Standard inversely heart-shaped. Wings and keel toothed at the base. Lower stamens gradually longest. Germen smooth, oval. Style awl-shaped, ascending, with a sharp simple stigma. Pod half covered by the permanent calyx, oval, acute, a little compressed, smooth, leathery, of one piece and not bursting, its cavity filled by a single kidney-shaped seed, of a very pale brown.

a calyx, flower-stalk and bractea. *b* standard. *c*, *c* wings. *d* keel. *e*, *E* stamens. *f* germen and style. *g* pod and seed.





Passiflora suberosa

May 1. 1865. Published by J. Sowerby, London.

TAB. 28.

PASSIFLORA suberosa.

Cork-bark'd Passion-flower.

PENTANDRIA Trigynia.

Corolla 5- or 10-cleft. *Nectary* guarded by a triple radiated crown. *Organs* of fructification on a stalk. *Berry* with many seeds.

Corolla five-cleft. *Calyx* none. *Fruit* oval. *Leaves* three-lobed, smooth. *Foot-stalks* with two glands.

Passiflora suberosa. *Linn. Sp. Pl.* 1358. *Ait. Hort. Kew.* v. 3. 309. *Jacq. Hort. Vind.* v. 2. 77. t. 163. *Cavan. Monadelph.* 442. t. 265.

AS this pretty Passion-flower, so remarkable for the 4 prominent ribs of cork which run along its stem, has not yet appeared in any of our popular works, and as its history has not been perfectly elucidated, we would not refrain from publishing it, though already well figured in Jacquin's *Hortus Vindobonensis*, a work to which few botanists can have access on account of its great rarity and exorbitant price.

We can positively assert it, on the authority of the original specimen described in *Sp. Plant. ed. 1*, to be the *suberosa* of Linnæus: but Jacquin and Cavanilles have justly animadverted on the confusion of its synonyms, and Lamarck, though generally an acute critic, has in his *Encyclopédie*, v. 3. 38. n°. 22, increased that confusion. Cavanilles esteems it also the *nigra* of that writer and of Jacquin's *Observationes*; which seems probable: but if so, how came that synonym to be omitted in the *Hort. Vind.*?

This species comes from the West Indies, and grows well in the bark bed of a stove, climbing round any thing in its way, bearing flowers and fruit through the autumnal months. We have delineated it from Lady Hume's collection.

It belongs to that tribe of Passion-flowers, pointed out by Mr. Sowerby in the *Transactions of the Linn. Soc. v. 2*, 27, which have only 5 lobes to the corolla, without any of those leaves on the flower-stalk which Linnæus takes for bractæas, but which seem, by analogy of other species, a real calyx.

The branches are long, weak, and smooth. Leaves alternate, (on slightly downy foot-stalks, each of which bears two purple glands,) somewhat cordate, with 3 slight acute lobes, entire, veiny, shining, nearly smooth on both sides. Stipulas lanceolate, narrow, acute. Tendrils axillary, simple. Flowers on solitary simple axillary stalks, with a slight ring where the calyx should be. Corolla green, tinged externally with a blush of red, especially in decay. Crown violet-coloured. Berry the size of an olive, purple and dotted like that fruit, containing 3 rows of seeds enveloped in sweetish pulp.

Botanists differ whether to refer *Passiflora* to the Caper or to the Gourd tribe. The great Jussieu is of the latter opinion. We remove it from the class *Gynandria* because the stamens are not inserted above the germen, but merely raised with that part on a pillar.

A is a magnified section of the flower, showing all its parts in their proper situations. *b* section of unripe fruit, the size of the original. *c*, *c* seeds.



Thelymitra ixioides

May 1. 1865. Published by J. S. Murray, London.

TAB. 29.

THELYMITRA *ixioides*.*Large-flowered Thelymitra.**GYNANDRIA Diandria.*

Petals 5, regular, spreading. *Nectary* a simple lip like a sixth petal. *Organs* of fructification enveloped in a hood bearing 2 feathery tufts. *Antheras* parallel.

Petals thrice as long as the hood, which is jagged at the top.

Thelymitra ixioides. Swartz in Stockh. Trans. for 1800.
228. t. 3. f. L, a, b, d—g.

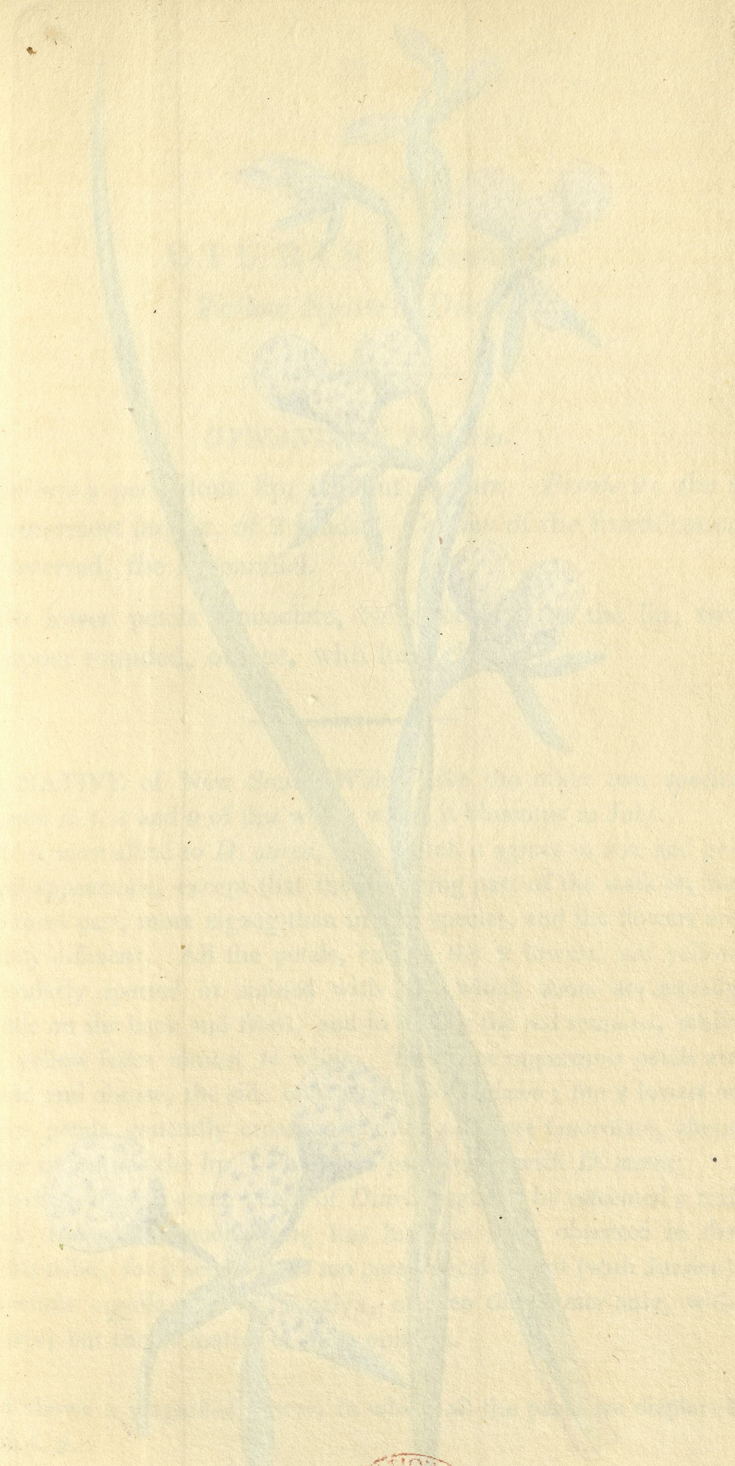
FORSTER first established this genus, of the Orchis tribe, in his *Genera Plantarum*, where the flower of the only species he knew, of which I have a specimen from himself, is figured. His son was afterwards persuaded to reduce it to *Serapias*; but the excellent Swartz has justly restored it to the rank of a genus, adding a new species, which he received through my hands from New South Wales, and of which we are enabled to exhibit the annexed figure, by means of specimens and coloured drawings sent by Dr. White. It flowers in August in its native country, but has not yet been brought to England.

The root is said to be a bulb; probably like those of an Orchis, and throws out a few fibres at the top. Stem solitary 2 or 3 feet high, simple, round, leafy, smooth. Leaves sheathing, alternate, linear-lanceolate, acute, erect. Spike terminal, erect, many-flowered. Bracteas solitary, lanceolate, pointed, membranous, concave. Flower-stalks slender, various in length. Flowers of a fine blue, paler at the back, formed of 5 spreading petals and a lip much resembling them. In the centre is a singular hood which envelops the organs of fructification, and whose top is jagged and fringed, bearing a pair of feathery tufts elevated on stalks. The column

stands within this hood, and is acute, bearing 2 parallel antheras, each of one cell, beneath which is the stigma. A small inner lip stands opposite to the column. The germen is obovate.

The hood and its plumy tips, which are quite of a different nature from the 2 feathery petals of Jussieu's *Bipinnula*, (*Arethusa biplumata* of Linnæus, *Sm. Pl. Ic. t. 23*), afford an excellent generic distinction. Forster's species has smaller flowers, with an entire hood half as long as the petals. Our specimens and drawings of *T. ixiioides* vary much in the size of the flowers, but we find no difference of structure to indicate a specific distinction.

A shows the hood and its contents magnified. B the jagged fringed summit. C feathery tips. D antheras. E small inner lip.





Diuris maculata

Mss. L. 1805. Published by J. Sowerby, London.

TAB. 30.

DIURIS maculata.

*Yellow Spotted Diuris.**GYNANDRIA Diandria.*

Nectary a pendulous lip, without a spur. *Petals* 9; the 5 outermost largest, of 2 kinds. *Column* of the fructification reversed, the *lid* parallel.

Two lower petals lanceolate, twice as long as the lip; two upper rounded, obtuse, with long claws.

A NATIVE of New South Wales, like the other two species figured in *t.* 8 and 9 of this work, where it blossoms in July.

It is most allied to *D. aurea*, with which it agrees in size and general appearance, except that the flowering part of the stalk is, for the most part, more zigzag than in that species, and the flowers are widely different. All the petals, except the 2 lowest, are yellow irregularly spotted or stained with red, which spots are equally visible on the back and front, and in drying the red remains, while the yellow fades almost to white. The three uppermost petals are round and obtuse, the side ones having long claws; the 2 lowest or green petals generally cross each other, and are lanceolate, about twice as long as the lip. The other parts agree with *D. aurea*.

Perhaps these 2 green petals of *Diuris* ought to be esteemed a real calyx, though no such thing has hitherto been observed in the *Orchis* tribe; for it seems to us too paradoxical to call (with Jussieu) the whole corolla and lip a calyx, or even the former only, with Swartz; but this is matter of mere opinion.

A shows a magnified flower, in which all the parts are displayed as in *t.* 9.

TAB. 30.

DIERIS maculata
Yellow Spotted Dieris

GYMNODIA Dieris

Nectary a pendulous lip, without a spur. Length 9; the outermost largest, of 2 kinds. Gown of the hindwings reversed, the hind parallel. Two lower petals lanceolate, twice as long as the lip; two upper rounded, obtuse, with long claws.

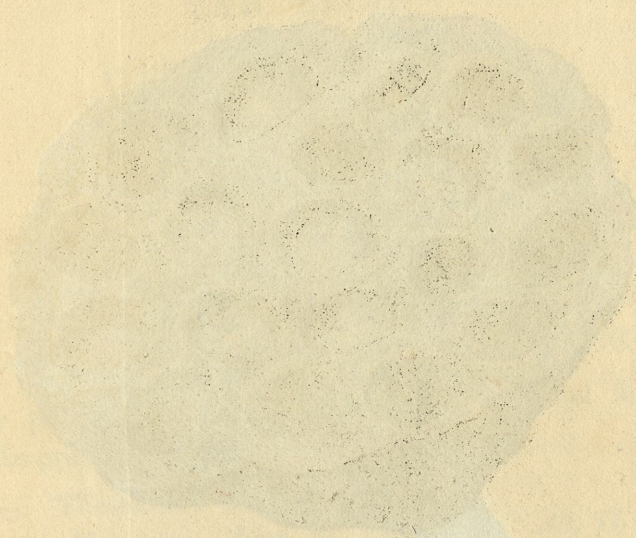
A NATIVE of New South Wales; like the other two species figured in 1 and 2 of this work, which it blossoms in July. It is most allied to *D. aurea*, with which it agrees in size and general appearance, except that the flowering part of the stalk is the most part, more xixay than in that species; and the flowers are widely different. All the petals, except the 2 lowest, are yellow irregularly spotted or stained with red, which spots are equally visible on the back and front; and in drying the red remains, while the yellow fades almost to white. The three uppermost petals are round and obtuse, the side ones bearing long claws; the 2 lowest or green petals are usually cross each other and are lanceolate, twice as long as the lip. The other parts agree with *D. aurea*. Perhaps these green petals of *Dieris* are to be reckoned a calyx, though the whole thing has hitherto been observed in the whole tribe; for it seems to be too prominent to call (with Linnaeus) the whole corolla and the calyx, or even the former only, with Swartz; but this is matter of mere opinion.

A shows a magnified flower, in which all the parts are displayed as in 1. 2.



Nymphaea Nelumbo.

From a Bot. Garden in 1790. Drawn by J. Smith.





Cyamus Nelumbo

June 1. 1805. Publ. Auth. by Jas. Sowerby, London.

TAB. 31, 32.

CYAMUS Nelumbo.

*Sacred Bean of India.**POLYANDRIA Polygymia.*

Calyx of 4 or 5 leaves. *Petals* numerous. *Nuts* immersed in a cellular receptacle, each crowned with its own *stigma*.

Leaves peltate, orbicular, waved. Foot-stalks and flower-stalks prickly.

Κύαμος. *Theophrast. lib. 4. cap. 10.*

Nymphæa Nelumbo. Linn. Sp. Pl. 730, α. Ait. H. Kew. v. 2. 227.

N. indica major. Rumph. Amboin. v. 6. 168. t. 73.

Nelumbo nucifera. Gærtn. Sem. v. 1. 73. t. 19.

Nelumbium speciosum. Willden. Sp. Pl. v. 2. 1258.

Tamará. Rheed. Malab. v. 11. 59. t. 30.

THIS splendid and celebrated plant is a native of still pools, and recesses in the margins of running streams, in the East Indies, growing, as Rumphius informs us, in a deep muddy soil, in a depth of water not less than 2 or 3 feet, nor more than 6. By attention to this information, and the contrivance of a deep tub in consequence of it, a plant of this species was made to flower very finely, some years ago, in the Duke of Portland's stove at Bulstrode, where Mr. Sowerby made a drawing of it. The *Cyamus* also blossomed last year at the Right Hon. Charles Greville's, and is to be found growing in several collections.

The root is very large and tuberous, black without, white within, throwing out numerous long fibres. Leaves radical, on long, round, prickly, upright stalks, peltate, circular, waved, smooth, rather glaucous, with many concentric radiating ribs; when young

they float on the water; but when at their full size, which is often 2 or 3 feet diameter, they rise 3 or 4 feet above it, becoming concave, and variously waved, twisted, or torn by the wind. Flowers on simple naked stalks, like those of the leaves, but rather taller, solitary, upright, very handsome and fragrant, 8 or 10 inches wide when fully expanded, lasting for several days. Calyx of 4 or 5 concave, ovate, green leaves. Petals numerous, ovate, acute, concave, of a delicate pale rose-colour, marked with many crimson longitudinal ribs, which being drawn more together as they approach the point, render that part of a deeper hue. Stamens numerous, yellow, thread-shaped, knobbed, with oblong, lateral anthers. Germen superior, green, smooth, inversely conical, its upper broad flat surface perforated with several holes, opening into as many cells. Each cell contains the rudiment of a seed, protruding through the orifice, and crowned with an oblong, obtuse, perforated, yellow, permanent stigma. The whole germen becomes a coriaceous entire capsule, which in process of time separates from the stalk, laden with ripe oval nuts, and floats down the water. The nuts vegetating, it becomes a cornucopia of young sprouting plants, which at length break loose from their confinement, and take root in the mud. This peculiar mode of propagation has evidently occasioned the plant, in conjunction with water, to be adopted as the symbol of fertility, in which point of view it has, from the remotest antiquity, been considered with religious veneration in India, and makes a conspicuous figure in the Mythology of that antient country. It is most generally known to the learned of Europe under the name of *Lotus*; the natives of Hindustan call it *Tumará*; the people of Ceylon *Nelumbo*. It has been confounded by very able writers, even lately, with the *Lotus* of Egypt, *Nymphæa* *Lotus* of Linnaeus; see *Andr. Repos. t. 391*, and *Curt. Mag. t. 797*. We presume the latter to have become important in the Egyptian Mythology only as a substitute for the former. The *Lotus* of Egypt is a real *Nymphæa*, bearing its seeds much in the manner of a Poppy, and scattering them in the mud. There is nothing peculiar in its appearance or mode of growth which could have caused it to be chosen for an emblem of fertility, were it not from the general resemblance of its leaves and flowers to our plant, the original *Lotus* of India. Hence I have for some time presumed to deduce an argument in support of the doctrine now prevalent, on other grounds, that the religion of the Egyptians was adopted from the East.

Innumerable illustrations respecting the *Tamará*, *Lotus*, or *Nelumbo*, as connected with the poetry or religion of the Hindus, may be found in the learned works of Sir W. Jones, Mr. Knight, and others. In the 4th volume of the *Amœnitates Academicæ*, p. 234, a carved horn of a rhinoceros, sent to Linnæus from China, is described. This is now before me, and is an exquisite specimen of oriental sculpture, evidently alluding to the mythology of India. The whole inverted base of the horn is carved into an elegant leaf of *Nelumbo*, rising from the water amid a group of perforated Chinese rocks. It is encompassed with various plants of a more diminutive proportion; a peach tree and a medlar (or rather perhaps the mangostan), with *Sagittaria*, *Pothos*, and the *Nelumbo* itself in flower and seed, cover the outer surface. Some fantastic lizards, with bunches of grapes and the Lit-chi fruit in their mouths, are crawling over the whole.

We have to add some remarks on the botanical characters and name of this plant.

Adanson, Gærtner, Jussieu and Willdenow are most unquestionably justified in separating it from *Nymphæa*, with which Linnæus and other writers have confounded it. The very peculiar fruit, unlike any thing else in the vegetable kingdom, and the stigmas, so totally different from those of *Nymphæa*, sufficiently distinguish it. The chief question in dispute is the name. *Nelumbium* is formed from *Nelumbo*, a Ceylon word of very confined use. If it must have a barbarous appellation, *Tamará* would be preferable, as being in general use among the learned and the vulgar throughout Hindustan. Happily we have no occasion to adopt either, for the plant has already a classical Greek name of primary authority and antiquity, being the real *Κύαμος* of Theophrastus, and therefore the word *CYAMUS* is what by every right and title belongs to it. *Nelumbo* may be retained as a specific name, rather out of deference to Linnæus and Gærtner than for any good reason; for *Tamará* being more universal would be more proper, and *speciosus*, given by Willdenow, more expressive. We wish however to respect the right of priority, and to avoid all needless changes.

We claim no merit in the restoration of this antient generic name. Bodæus a Stapel in his Commentary on Theophrastus, p. 446, and Hermann in his *Paradisus Batavus* have amply illustrated the subject, and others, as Plukenet, have alluded to it. But it is remarkable that no recent writer on the mythological history of the *Nelumbo* should have been aware of its being the celebrated *Κύαμος* or Pytha-

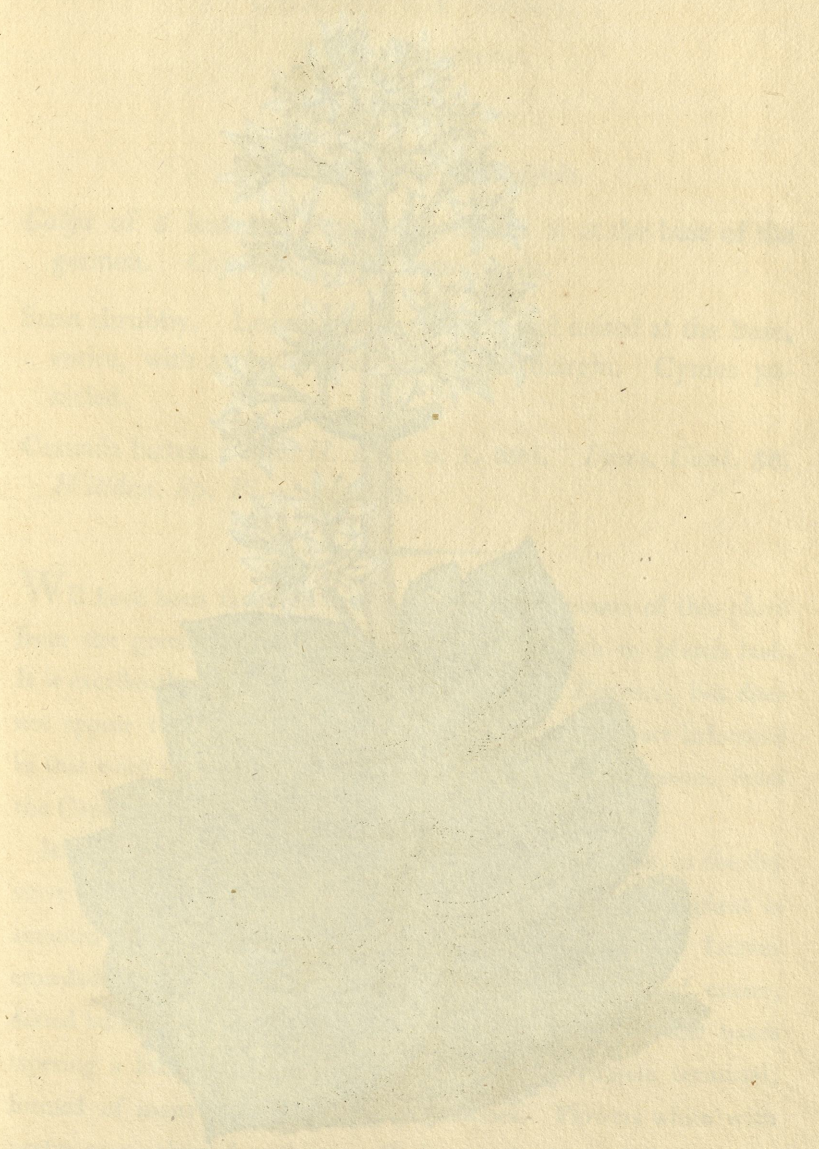
gorean bean, which is so evident from the description in Theophrastus. The "cellular head like a round wasp's nest, with a bean in each cell projecting a little beyond its orifice: the rose-coloured flower, twice as large as a poppy," as well as all the rest of his account, are strikingly characteristic. By this discovery many things, hitherto difficult of explanation, are elucidated. We can no longer wonder at the prohibition of these beans to the Egyptian priests, or the disciples of Pythagoras. A plant consecrated to religious veneration as an emblem of reproduction and fertility, would be very improper for the food, or even the consideration, of persons dedicated to peculiar purity. The Egyptian priests were not allowed even to look upon it*. Authors scarcely explain sufficiently whether Pythagoras avoided it from respect or abhorrence. However that might be, we need not, in order to ascertain his motives, have recourse to any of the five reasons supposed by Aristotle, nor to the conjectures of Cicero. Neither can there be any doubt that the prohibition given by Pythagoras was literal; and not merely allegorical, as forbidding his followers to eat this kind of pulse, because the magistrates in some places were chosen by a ballot with black and white beans, thereby giving them to understand that they should not meddle with public affairs. Such far-fetched explanations show the ingenuity of commentators rather than their knowledge.

As the Pythagorean prohibitions are now obsolete, perhaps these beans, imported from India, might not be unwelcome at our tables. The root of the *Cyamus* is also used as food, but we have many vegetables preferable to it.

Tab. 31 shows a flower of its usual size, with one of the smaller leaves. *a* a stamen separate.

Tab. 32 contains the ripe fruit; with an outline of the whole plant as it grew at Bulstrode. *a* is a nut taken out of its cell. *b* a section of the same. *c* the embryo, always green, taken out of the nut, to the top of which its base was fixed. *d* the embryo sprouting from the nut.

* It must be confessed that many of the hieroglyphics, still to be seen about their temples, seem inconsistent with a prohibition of this kind.





Crassula lactea

June 1. 1805. Published by J.C. Sowerby, London.

TAB. 33.

CRASSULA lactea.

White Crassula.

PENTANDRIA Pentagynia.

Calyx of 5 leaves. *Petals* 5. *Scales* 5 at the base of the germen. *Capsules* 5, with many seeds.

Stem shrubby. Leaves ovate, tapering and united at the base, entire, with a row of dots within the margin. Cymes panicled.

Crassula lactea. *Ait. H. Kew. v. 1. 396.* *Donn. Cant. 53.*
Willden. Sp. Pl. v. 1. 1554.

WE have been favoured with a flowering specimen of this plant from the green-house of Mr. Hooker of Norwich in March last. It is excellently well characterized in the *Hortus Kewensis*, but does not appear to have been figured by any author. We are informed in that work that it was introduced in 1774, by Mr. Masson, from the Cape of Good Hope.

It is cultivated, like other succulent plants of the Cape, in the dry stove or in some airy part of the green-house. The whole plant is smooth. Stem shrubby, much branched, round, leafy. Leaves crowded, crossing each other in pairs, thick, ovate, pointed, entire, dotted both above and below just within the margin; their bases tapering a little, and united round the stem. Panicle terminal, formed of many cymose opposite branches. Flowers white with pretty rose-coloured antheras. Scales at the base of the germen scarcely perceptible. Petals, stamens and germens often 6.

Tab. 33 shows the plant of its natural size, with every part of the flower in its proper place.

TAB. 38

CRASSULA lutea.

Walt. Crassula.

CRASSULA lutea.

Color of a flower. Petals 5 at the base of the
 corolla. Corolla 5 with many scales.

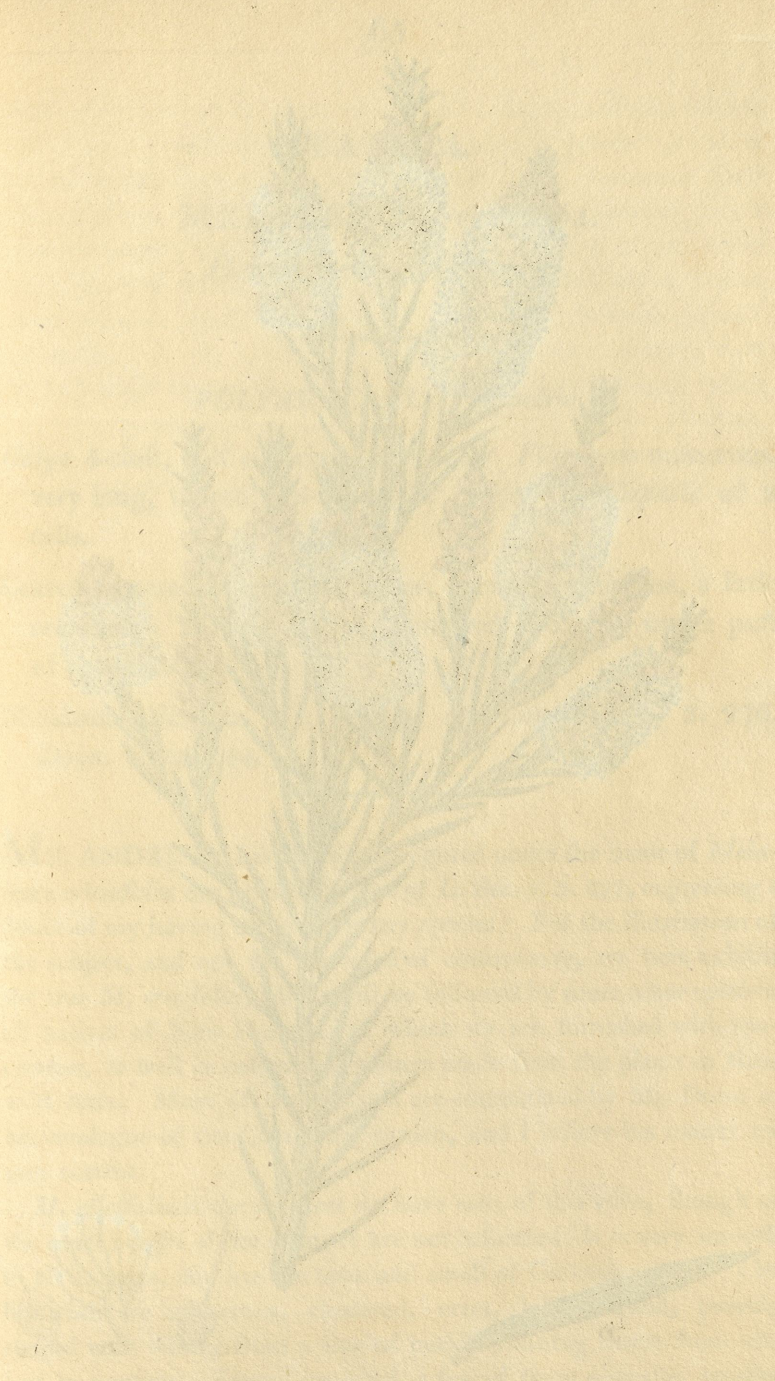
Stem shrubby. Leaves erect, narrow and united at the base,
 ending with a row of four in the margin. Cymes pa-
 nicle.

Crassula lutea. Walt. W. K. 1. 306. Don. Cat. 53.
 Walpole 1. 1. 1. 1. 1.

We have been favored with a flowering specimen of this plant
 from the garden of Mr. H. K. in March last.
 It is a very beautiful plant, and does
 not appear to have been before. It is a very interesting
 in that work that it was introduced in 1771 by the British, from
 the Cape of Good Hope.

It is a very interesting plant, and does
 not appear to have been before. It is a very interesting
 in that work that it was introduced in 1771 by the British, from
 the Cape of Good Hope.

This shows the plant in its natural state, with every part of
 the flower in its proper place.





Melaleuca ericifolia

June 1. 1805. Published by Jas. Sowerby, London.

TAB. 34.

MELALEUCA ericifolia.

*Heath-leaved Melaleuca.**POLYADELPHIA Polyandria.*

Calyx 5-cleft, half superior. *Petals* 5. *Filaments* numerous, very long, united into 5 parcels. *Style* 1. *Capsule* of 3 cells.

Leaves scattered or opposite, linear, nerveless, pointless, a little recurved. Flowers lateral, clustered about the upper part of the branches.

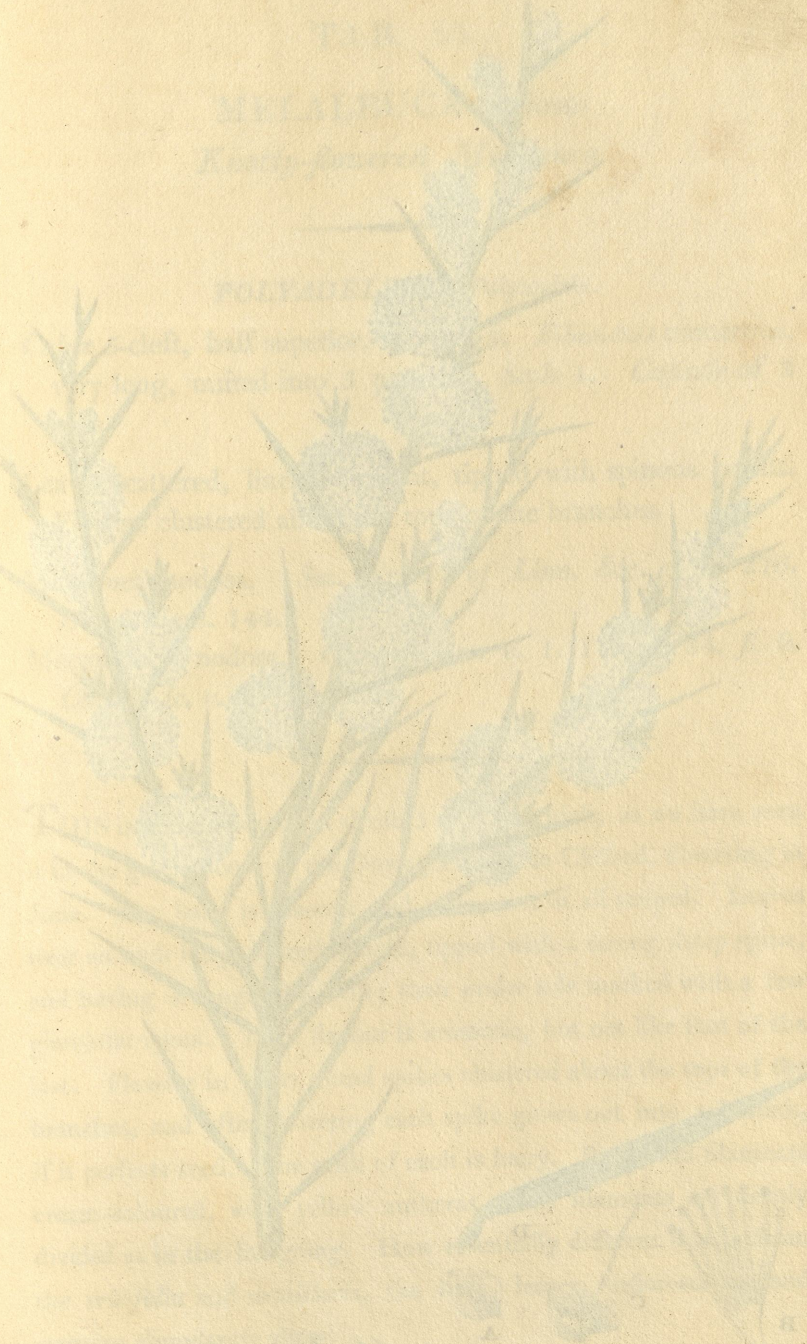
Melaleuca ericifolia. Sm. *Trans. of Linn. Soc.* v. 3. 276.
Donn. Cant. 144.

MR. ANDREWS has by mistake figured under the name of *Melaleuca ericæfolia* my *armillaris*, *Tr. of L. Soc.* v. 3. 277, expressing a doubt of my having made too many species. For the illustration of the subject, and not for the sake of controversy, we here exhibit the true *M. ericifolia*, which will be followed by some other species, all natives of New Holland, of which we are furnished with specimens, as well as coloured drawings made from the plants in their wild state. Most of these plants are enumerated by Mr. Donn in his catalogue of the Cambridge garden, and I believe his names are very correct.

M. ericifolia is the smallest we have seen of this tribe, though of the exact height of the stem we are not informed. It is very smooth in all its parts, and has the taste and smell of Coriander seeds. The branches are numerous, clustered, erect, leafy, round, prettily striped with white, from a line of cuticle running down from one leaf to another. Leaves scattered, a few of them opposite, sessile, half an inch (more or less) in length, linear, flattish, entire, a little recurved, sharpish but without any spinous point, and destitute of rib or veins. Under the microscope they are finely dotted with ir-

regular glandular points. Stipulas wanting. Flowers sessile, lateral, crowded, forming cylindrical clusters round the branches below their leafy summits. Each flower has its own concave broad bractea. Calyx globular, dotted with resinous points, and crowned with 5 obtuse teeth. Petals red on the outside in the bud, cream-coloured, as well as the stamens, when expanded, dotted with resinous points. The filaments of the latter are long and very deeply divided, so that their common claw is shorter than the petals. In this respect they differ from *M. armillaris*, which species is so well figured by Mr. Andrews, that there is no occasion for us to republish it.

A is a magnified petal. B stamen. C germen and style. D leaf.





Melaleuca nodosa

June 1. 1805. Published by J. Sowerby, London.

TAB. 35.

MELALEUCA nodosa.
Knotty-flowered Melaleuca.

POLYADELPHIA Polyandria.

Calyx 5-cleft, half superior. *Petals* 5. *Filaments* numerous, very long, united into 5 parcels. *Style* 1. *Capsule* of 3 cells.

Leaves scattered, linear, straight, tipped with spinous points.
 Flowers clustered about the tops of the branches.

Melaleuca nodosa. *Sm. Trans. of Linn. Soc. v. 3. 276.*
Donn. Cant. 144.

Metrosideros nodosa. *Gærtn. Sem. v. 1. 172. t. 34. f. 6.*
Cavan. Ic. v. 4. 19. t. 334.

THIS is a rigid branched shrub 5 or 6 feet high, as we have seen it in the green-house of the Dowager Lady de Clifford, flowering in June. The bark is smooth and even, not at all striped. Leaves near an inch long, straight, rigid, tipped with a strong sharp spine, and having a longitudinal rib; their under side marked with a few glandular spots. Their flavour is aromatic, but not like that of the last. Flowers in short round spikes clustered about the tops of the branches, and after flowering each spike grows out into a branch, if it perfects seed. The stalk of each is hairy. Petals and filaments cream-coloured, with yellow antheras. The filaments are deeply divided as in the foregoing. How essentially different this is from the *ericifolia* and *armillaris*, the bark, leaves, inflorescence and stamens abundantly show.

A petal. B stamen. C germen and style. D leaf, all magnified.

TAB. 35.

MILLETUCA nodosa.

Knotty-flowered Albidula.

POLYDELPHIA Polypetala.

Color a-dish, half superior. Petals 5. Filaments numerous.
very long, united into 5 parcels. Style 1. Capsule of 8

leaves scattered, linear, straight, tipped with spinous points.
Flowers clustered about the tops of the branches.

Albidula nodosa. Sem. Trans. of Linn. Soc. v. 3. 216.

Donn. Conn. 144.

Millettuca nodosa. Curv. Sem. v. 1. 172. A. 34. A. 6.

Curv. A. v. 4. 12. A. 334.

This is a very branched shrub 3 or 4 feet high, as we have seen
in the greenhouse of the Dowry Lady de Cider, flowering in
June. The bark is smooth and even, not at all striped. Leaves
near to each other, linear, straight, tipped with a strong sharp spine,
and having a long pointy tip; their under side marked with a few
glanular spots. The flower is aromatic, but not like that of the
last. Flowers in short round spikes clustered about the tops of the
branches, and after flowering each spike grows out into a branch,
it is quite new. The stalk of each is hairy. Petals and filaments
cream-colored, with yellow anthers. The filaments are deeply
divided as in the foregoing. How essentially different this is from
the erythraea and caryophylla, the bark, leaves, inflorescence and
stamens abundantly show.

A. petal. B. stamen. C. germin. and style. D. leaf, all magnified.





Melaleuca thymifolia

July 1. 1805. Published by J. Sowerby, London.

TAB. 36.

MELALEUCA thymifolia.

*Thyme-leaved Melaleuca.**POLYADELPHIA Polyandria.*

Calyx 5-cleft, half superior. *Petals* 5. *Filaments* numerous, very long, united into 5 parcels. *Style* 1. *Capsule* of 3 cells.

Leaves opposite, elliptic-lanceolate, nerveless. Flowering branches lateral, very short, few flowered. Filaments branched more than half way down.

Melaleuca thymifolia. *Sm. Trans. of Linn. Soc. v. 3. 278.*
Donn. Cant. 144.

M. coronata. *Andr. Repos. t. 278.*

M. gnidiæfolia. *Venten. Jard. de la Malmaison, t. 4.*

Metrosideros calycina. *Cavan. Ic. v. 4. 20. t. 336. f. 2.*

I FIND it necessary to claim my own original name for this plant, which has been twice changed, surely not for the better, without any reference to the Linnæan Transactions where it was first published in 1797. Monsieur Ventenat however is quite clear of this impropriety, he having merely retained a chance denomination by which, as I learn from himself, the plant was sent him from the English nurseries.

It is a native of New South Wales, and was raised from seed by Mr. Fairbairn at Chelsea many years ago. Our figure was drawn in August 1794 at Mr. Robinson's, Stockwell.

The stem is shrubby, about 2 feet high, with numerous opposite round smooth leafy branches, whose cuticle is scarcely striped. Leaves opposite, each pair crossing the next, sessile, from $\frac{1}{4}$ to $\frac{1}{2}$ an inch long, spreading, of a narrow elliptical form, entire, pointless, without any prominent rib or veins, smooth, copiously dotted

with resinous dots, the seat of a very aromatic essential oil. Flowers but few together, lateral, sessile, on short lateral branches. Calyx turbinate, smooth. Petals purple. Filaments of the same colour, opposite to them, and twice as long, feathered half-way down or more, their branches curved inwards. Stamens yellow. Style purple, with a simple whitish stigma. Capsule globular, crowned with the hardened teeth of the calyx. Seeds small and numerous.

It is rather a tender green-house plant, seldom kept long by any body, but easily renewed from seed. The soil should be like that in which the heath kind are cultivated.

M. Ventenat's figure is taken from a very imperfect specimen; and we trust the addition of the fruit, and of an English description, with the correction of the name, will excuse our giving what is already well figured by Mr. Andrews, which we mean generally to avoid.

a, a calyx. *b, b* petals. *c, c, c*, C stamens. *d* style. *e, e* fruit.





Virgilia helioides

July 1. 1806. Published by J. Sowerby, London.

TAB. 37.

VIRGILIA helioides.

Sun-flower Virgilia.

SYNGENESIA Polygamia-frustranea.

Calyx of a double row of leaves. *Corolla* radiant: *marginal*
florets 3-cleft. *Seed-crown* of several chaffy awned leaves.
Receptacle convex, chaffy.

Virgilia helioides. L'heritier *Monogr. t. 1, 2.*

Galardia bicolor. Lamarck. *Encycl. v. 2. 590.*

OUR gardens were enriched with this handsome plant about the year 1787 by M. Thouin, who sent the seeds from Paris. It was reported to be a native of Louisiana, and was considered as a great acquisition to the French gardens; but being an annual, and ripening seed with difficulty in Europe, it is now we believe entirely lost. Mr. Sowerby drew it at Messieurs Lee and Kennedy's, where it was to be seen but one season. Its beauty is alluded to in Mr. Andrews's work, *p. 357.*

The French botanists have differed about its name. We prefer that given by the celebrated L'heritier, in a monograph, or express dissertation, on this plant, of which 12 copies only were printed, in which he has commemorated the great Latin poet, whose Georgics certainly entitle him to such a botanical memorial.

Root annual, branched. Stem upright, 2 or 3 feet high, much branched, leafy, round, streaked with dark and light green, stained with purple, and sprinkled with soft white hairs. Leaves alternate, sessile, oblong, sinuated or toothed, rather fleshy, roughish and downy, light green, with a single mid-rib. Flowers terminal, solitary, on long stalks, fragrant, beautifully variegated with crimson and yellow. *Calyx* of 2 rows, we scarcely find more, of lanceolate, pointed, rough leaves. Radius of many broad 3-cleft, spreading florets; yellow and veiny at the extremity; crimson and striped at the base;

each with the rudiments of a germen, but barren. Disk of numerous, tubular, 5-cleft, perfect and fertile florets, of which the more central are yellow or greenish, the outermost purplish. Stamens 5, with united antheras. Germen obovate. Stigmas 2, acute, hairy. Seed crowned with from 5 to 8 flat, acute, chaffy scales, joined at their base; being, as L'heritier observes, a proper calyx. Receptacle hemispherical, clothed with chaffy scales. The genus is nearly allied to *Rudbeckia*.

a, *a* show a flower of the radius, with its abortive germen and seed-crown. *b* a tubular floret of the disk, with its antheras and stigma.

OUR gardeners were enriched with this handsome plant about the year 1757 by M. Thoun, who sent the seeds from Paris. It was reported to be a native of Louisiana, and was considered as a great acquisition to the French gardens; but being an annual, and ripening seed with difficulty in Europe, it is now we believe entirely lost. Mr. Boncompagni drew it at Meissen and Kennedy's, where it was to be seen but one season. Its beauty is attested to in Mr. Andrews's work, p. 277.

The French botanists have differed about its name. We prefer that given by the celebrated L'heritier, in a monograph, or express description, on this plant, of which 12 copies only were printed, in which he has commemorated the great Latin poet, whose Georgics certainly entitle him to such a botanical memorial.

Root annual, branched, stem upright, 2 or 3 feet high, much branched, leafy, round, and with dark and light green, stained with purple, and sprinkled with soft white hairs. Leaves alternate, sessile oblong, sinuated or toothed, rather fleshy, roughish and hairy, on light green, with a single mid-rib. Flowers terminal, solitary, on long stalks, fragrant, beautifully variegated with crimson and yellow. Color of a rose, we scarcely find more of lanceolate pointed, rough leaves. Radius of many round, 5-cleft, spreading flutes; the innermost being at the extremity, and situated at the base.





Rudbeckia pinnata .

July 2. 1865. Published by J. Sowerby, London.

TAB. 38.

RUDBECKIA pinnata.

*Fragrant Pinnated Rudbeckia.**SYNGENESIA Polygamia-frustranea.*

Calyx of a double row of leaves. *Corolla* radiant: *marginal florets* toothed. *Seed* crowned with 4 teeth. *Receptacle* conical, scaly.

Leaves rough all over: the lower ones compound; middle ones three- or five-cleft; uppermost undivided. Stem rough.

Rudbeckia pinnata. *Ventenat Jard. de Cels. t. 71.*

RECEIVED by Lady Hume from the botanical garden at Madrid, by the name of *Rudbeckia odorata*; but we do not find it mentioned in the works of Cavanilles, nor of any other author, by that name. It is undoubtedly the *pinnata* of Ventenat, though not, as that ingenious writer supposed, the *digitata* of Miller and Aiton. It flowers with us late in the autumn in the open border, being a hardy perennial. M. Ventenat informs us it was discovered by Michaux in the country of the Illinois.

Root fibrous, perennial. Stem erect, branched, several feet high, furrowed, rough with short ascending bristles, as are the flower-stalks, calyx, and leaves in every part; even the yellow florets of the radius are rough and glandular. The lower leaves are doubly pinnatifid, and somewhat lyrate, their lobes jagged and decurrent; those higher up have 3 or 5 simple lobes; the uppermost are simple and undivided. Flowers upright, on long, stiff, simple stalks. Calyx of numerous spreading leaves. Radius of 8 or 10 large spreading florets. Disk conical, dark purple, almost black.

a receptacle and calyx. *b* floret of the radius, with its barren germen. *c* floret of the disk. *d, d* scales of the receptacle.

RUDBECKIA pinnata

Frugum. Pinnatifid Rudbeckia.

SYNOPSIS Polyanthes-fruticosa.

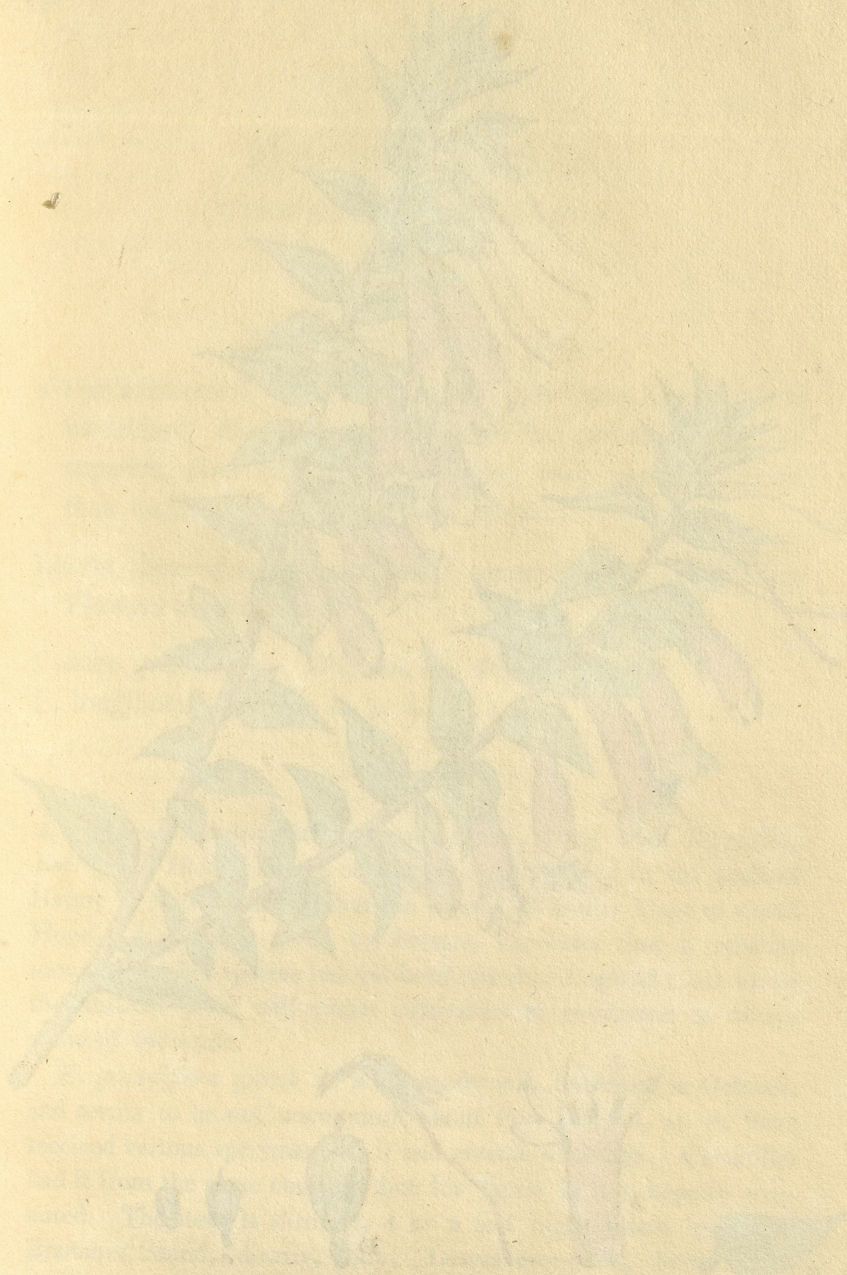
Calyx of a double row of leaves. Corolla tubular: marginal
 flowers toothed. Seed crowned with a small, fleshy
 conical, scaly.
 Leaves rough all over; the lower ones compound; middle
 ones three- or five-lobed; uppermost undivided. Stem
 rough.

Rudbeckia pinnata. Ventner. Fund. de Cels. t. 71.

RECEIVED by Lady Thorne from the botanical garden at Madrid,
 by the name of Rudbeckia edwardsii; but we do not find it mentioned
 in the works of Cavanilles, nor of any other author, by that name.
 It is undoubtedly the plant of Ventner, though not, as that
 ingenious writer supposed, the friend of Miller and Aiton. It
 flowers with us late in the autumn in the open border, being a
 hardy perennial. M. Ventner informs us it was discovered by
 Michaux in the country of the Illinois.

Root fibrous, perennial. Stem erect, branched, several feet
 high, sinuately rough with short ascending bristles, as are the
 flower-stalks, calyx, and leaves in every part; even the yellow
 parts of the corolla are rough and scabrous. The lower leaves are
 doubly pinnatifid, and somewhat like their lobes jagged and
 dentate; those higher up have three or five lobes; the upper
 most are simple and undivided. Flowers upright on long, stiff
 simple stalks. Calyx of numerous spreading leaves. Diameter of
 or 10 large spreading flowers. Disk conical, dark purple, almost
 black.

a receptacle and calyx. A part of the radius with its paren-
 chyma, a part of the disk, & a scale of the receptacle.





Epacris grandiflora.

July 1 1805. Published by J. Sowerby, London.

TAB. 39.

EPACRIS grandiflora.

*Crimson Mountain-blossom.**PENTANDRIA Monogynia.*

Calyx imbricated. *Corolla* tubular. *Stamens* inserted into its orifice. *Scales* 5 at the base of the germen. *Capsule* superior, of 5 cells, and 5 valves, with partitions from their middle. *Seeds* numerous, chaffy.

Leaves heart-shaped, pungent, recurved, on footstalks. Flowers pendulous.

Epacris grandiflora. Willden. *Sp. Pl.* v. 1. 834.

E. longiflora. Cavan. *Ic.* v. 4. 25. t. 344.

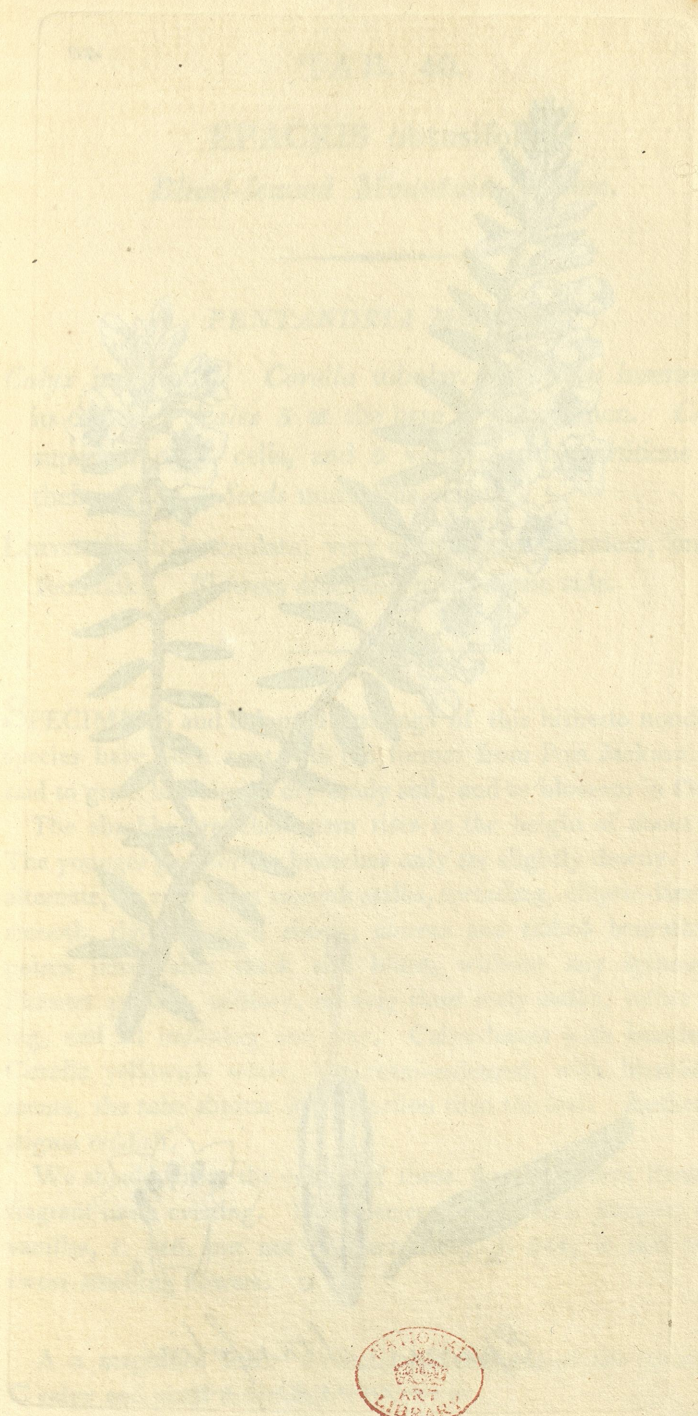
THIS beautiful and various genus seems, along with *Styphelia*, *Bot. of N. Holl.* t. 14, to occupy the same place in the scale of Nature in New Holland, that the Heaths do at the Cape of Good Hope. Its name, given by Forster, expresses that it inhabits mountains. No species has yet been raised in England; but surely the annexed plate will excite cultivators to endeavour to obtain some of the seeds.

E. grandiflora grows in a dry sandy soil, flowering in October, and seems to be not uncommon about Port Jackson, as we have received various specimens of it and several drawings. Cavanilles had it from the same country, but his figure is not happily executed. The stem is shrubby, 4 or 5 feet high, much branched. Branches round, downy, leafy. Leaves evergreen, hard, rigid, numerous, alternate, on short downy stalks, recurved, heart-shaped, with a spinous point, entire, thick-edged, obscurely ribbed, nearly smooth. Flowers axillary, solitary, pendulous, on short scaly stalks, leaning all one way. *Calyx* imbricated; its leaves ovate, sharp-pointed, fringed; the 5 innermost longest,

narrowest and equal. Corolla an inch long, tubular, smooth, with a regular, spreading, 5-cleft, acute, white border, the tube of an elegant crimson. Stamens short, in the mouth of the tube. Anthers brown, 2-lobed, bursting longitudinally. Pollen yellow. Germen superior, with 5 blunt scales at its base. Style thread-shaped, extended beyond the stamens, with a capitate stigma. Capsule of 5 hard, rigid, obtuse valves, with partitions from their centre. Seeds minute, angular.

Sometimes the flowers are 4-cleft, with only 4 stamens.

a leaf with its stalk. *b* corolla opened to show the stamens. *c* calyx and pistil. *D* magnified germen and its scales. *e* capsule.





Epacris obtusifolia

July 1. 1866. Published by T. & S. Sowerby, London.

TAB. 40.

EPACRIS obtusifolia.

*Blunt-leaved Mountain-blossom.**PENTANDRIA Monogynia.*

Calyx imbricated. *Corolla* tubular. *Stamens* inserted into its orifice. *Scales* 5 at the base of the germen. *Capsule* superior, of 5 cells, and 5 valves, with partitions from their middle. *Seeds* numerous, chaffy.

Leaves elliptic-lanceolate, very obtuse, and pointless, on short footstalks. Flowers drooping toward one side.

SPECIMENS and coloured drawings of this hitherto nondescript species have been sent with the former from Port Jackson. It is said to grow likewise in dry sandy soil, and to blossom in October.

The shrubby branched stem rises to the height of about 3 feet. The younger parts of the branches only are slightly downy. Leaves alternate, on very short smooth stalks, spreading, elliptic-lanceolate, smooth, rigid; flattish above; convex and ribbed beneath; their points remarkably thick and blunt, without any spinous tips. Flowers axillary, solitary, on very short scaly stalks, rather drooping, and all inclining one way. *Calyx*-leaves with bearded tips. *Corolla* yellowish white, or cream-coloured, with bluntish segments, the tube shorter in proportion than the last. *Antheras* and stigma reddish.

We should, from the colour of these flowers, guess them to be fragrant in an evening. One species, the *Epacris pungens* of Cavanilles, *t.* 346, but not of *Curt. Mag. t.* 844, is said to have sweet-smelling flowers.

A a magnified leaf. *b* corolla and stamens of the natural size.
C calyx and pistil magnified.

TAB. 40.

EPACRIS obtusifolia.

Blunt-leaved Mountain-blossom.

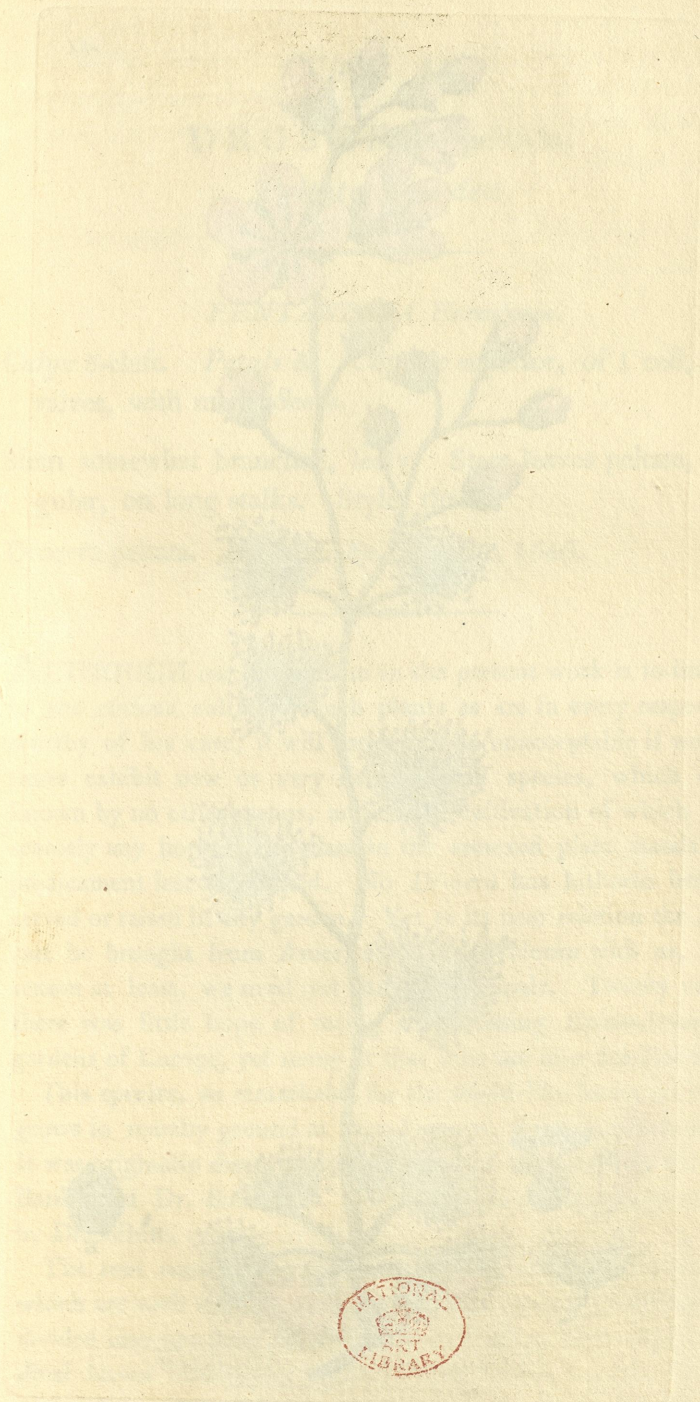
PENTANDRIA Monogynia.

Calyx imbricated. Corolla tubular. Stamens inserted into its orifice. Styles 2 at the base of the germ. Capsule superior, of 5 cells, and 5 valves, with partitions from their middle. Seeds numerous, chaffy. Leaves elliptic-lanceolate, very obtuse, and pointless, on short footstalks. Flowers drooping toward one side.

SPECIMENS and coloured drawings of this hitherto nondescript species have been sent with the former from Port Jackson. It is said to grow likewise in dry sandy soil, and to blossom in October. The shrubby branched stem rises to the height of about 3 feet. The younger parts of the branches only are slightly downy. Leaves alternate, on very short smooth stalks, spreading, elliptic-lanceolate, smooth, rigid; glaucous above; convex and ribbed beneath; their points remarkably thick and blunt, without any spinous tips. Flowers axillary, solitary, on very short scaly stalks, rather drooping, and all inclining one way. Calyx-leaves with bearded tips. Corolla yellowish white, or cream-coloured, with bluish segments, the tube shorter in proportion than the last. Anthers and stigma reddish.

We should, from the colour of these flowers, guess them to be fragrant in an evening. One species, the *Epacris purpurea* of Cavendish, A. 346, but not of Cav. A. 844, is said to have sweet-smelling flowers.

A magnified leaf. A corolla and stamens of the natural size. Calyx and pistil magnified.





Drosera peltata
Angl. 1803. Designed by J. J. Smith, London.

TAB. 41.

DROSERA peltata.

*Peltate Sun-dew.**PENTANDRIA Hexagynia.*

Calyx 5-cleft. *Petals* 5. *Capsule* superior, of 1 cell, and 3 valves, with many *Seeds*.

Stem somewhat branched, leafy. Stem-leaves peltate, triangular, on long stalks. Styles three.

Drosera peltata. Willden. *Sp. Pl.* v. 1. 1546.

ALTHOUGH our general aim in the present work is to introduce to the curious cultivator such plants as are in every respect most worthy of his care, it will surely not be unacceptable if we sometimes exhibit new or very extraordinary species, which can be known by no other means, and of the cultivation of which there is scarcely any hope. The plant in the annexed plate stands in the predicament last mentioned. No *Drosera* has hitherto been preserved or raised in any garden. Yet as its near relation the *Dionæa* can be brought from America, so as to bloom with us, for one season at least, we need not altogether despair. Twenty years ago there was little hope of seeing a flourishing *Epidendrum* in the gardens of Europe, yet many of that tribe are now familiar to us.

This species, so remarkable for the shield-like leaves on its stem, grows in marshy ground at Port Jackson, flowering in September. It was originally discovered in that part of the world by Sir Joseph Banks and Dr. Solander. Our specimens and drawings were sent by Dr. White.

The root seems to be perennial, bearing sometimes many stems, which are each about a span high, erect, smooth, leafy, generally divided into two long simple clusters of red or white flowers. Radical leaves numerous, kidney-shaped; the rest peltate, alternate, triangular; all on longish stalks, clothed on the upper side, as well

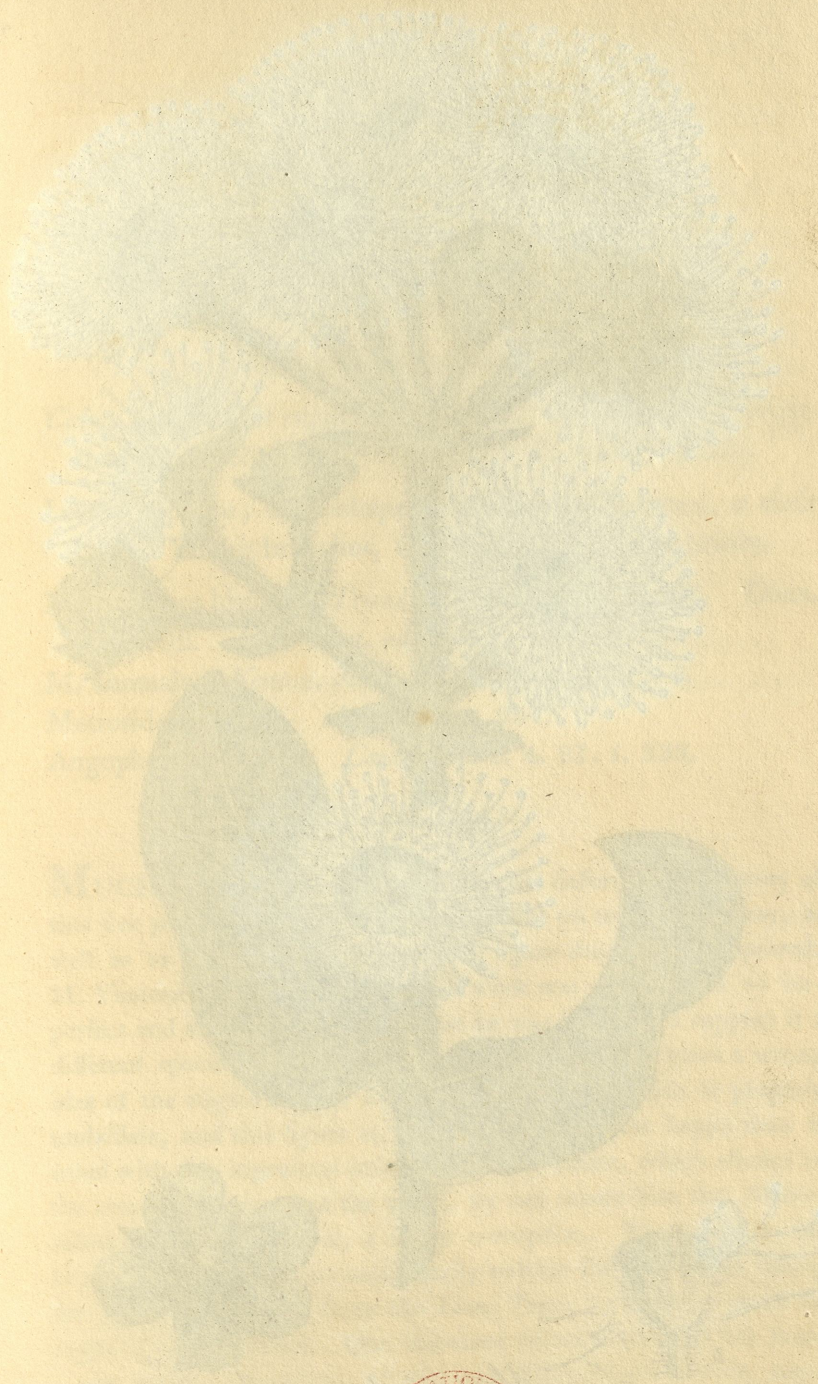
as fringed, with numerous, coloured, glandular, viscid hairs, which probably serve to catch flies, as in our British species of Sun-dew. The calyx is also fringed and reddish. Petals obovate. Stamens 5. Styles only 3, with fringed stigmas. Seeds numerous, minute, angular, rugged.

a calyx and pistil. *b* petal. *c* stamen. *D* germen and styles magnified. *E, F* capsule and seed.

ALTHOUGH our general aim in the present work is to introduce to the curious cultivator such plants as are in every respect most worthy of his care, it will surely not be unacceptable if we sometimes exhibit new or very extraordinary species, which can be known by no other means, and of the cultivation of which there is scarcely any hope. The plant in the annexed plate stands in the greenhouse last mentioned. No D. writer has hitherto been perceived or raised in any garden. Yet as its near relation the *Phlox* can be brought from America, so as to bloom with us for one season at least, we need not despair. Twenty years ago there was little hope of seeing a flowering *Phlox* in the gardens of Europe, yet many of that tribe are now familiar to us.

This species, so remarkable for the shield-like leaves on its stem, grows in marshy ground at Fort Jackson, flowering in September. It was originally discovered in that part of the world by Sir Joseph Banks and Dr. Solander. Our specimens and drawings were sent by Dr. Solander.

The root seems to be perennial, bearing numerous small stems, which are each about a span high, erect, smooth, leafy, generally divided into two opposite clusters of red or white flowers. The distal leaves numerous, kidney-shaped; the next petioles, rhomboid, triangular; all on longish stalks, clothed on the upper side, as well





Metrosideros hispida

Aug 22. 1866. Published by Jas. Sowerby, London.

TAB. 42.

METROSIDEROS hispida.

*Rough Metrosideros.**ICOSANDRIA Monogynia.*

Calyx 5-cleft, half superior. *Petals* 5. *Stamens* much longer than the corolla. *Stigma* simple. *Capsule* of 3 cells.

Leaves opposite; heart-shaped, and clasping the stem, at their base. Young branches, flower-stalks and calyx bristly.

Metrosideros hispida. *Trans. of Linn. Soc. v. 3. 267. Donn.*

Cant. 92. Mill. Dict. ed. Mart.

M. anomala. *Venten. Jard. de la Malmaison, t. 5.*

Metrosidera hirsuta. *Andr. Bot. t. 281.*

Angophora cordifolia. *Cavan. Ic. v. 4. 21. t. 338.*

MUCH confusion and misconception has deformed the history of this fine plant, which we feel it incumbent on us to clear away, as well as to give a more characteristic figure than has yet appeared. M. Ventenat's plate in his beautiful work was taken from so imperfect and starved a specimen, that he was induced to suppose it a different species. Mr. Andrews's, though the best, gives a wrong idea of the stigma as well as the inflorescence, which is properly umbellate, and this figure is, in other respects, less happy than is usual with this ingenious artist. As to the name, which alludes to the iron-like hardness of the wood, we can assure him that *Metrosidera* was, from the first, a vulgar corruption. The trivial name *hirsuta* he seems to have accidentally written for *hispida*, in taking the specific character from the *Linn. Trans.*, a work to which he ought to have referred. Our lamented friend Cavanilles has made a new genus, *Angophora*, of this and *Metrosideros costata*, erroneously giving to the latter alternate leaves. That supposed genus is founded on the seeds being solitary, when ripe, in each cell. But

this only fills up the measure of error concerning the plant before us. Our figure shows sufficiently that the seeds, in the germen, are numerous, though indeed most of them prove abortive.

This *Metrosideros* was among the first shrubs raised from seeds collected at New South Wales, and flowered for the first time in Mr. Hibbert's valuable collection at Clapham, where our sketch was made in July 1798. The stem is 4 or 5 feet high, rigid, branched, round, leafy. Leaves evergreen, very hard and stiff, opposite, almost sessile, oblong, waved, clasping the stem with their heart-shaped base. Flowers on terminal stalks, generally more or less umbellate. The petals, and long numerous stamens, are of a yellowish cream-colour. Stigma quite simple. Calyx thick and angular. The branches and leaves are rough with rigid prominent hairs; the flower-stalks, and calyx clothed with shorter, more dense, glandular reddish hairs, like those of *Robinia hispida*. The plant is preserved in the greenhouse during winter, but is not very tender.

a under side of the calyx. *b* section of the same, showing the young seeds, and the insertion of the stamens. *C* magnified hairs.





Digitalis Thapsi

Aug. 1. 1868. Published by J. Sowerby, London.

TAB. 43.

DIGITALIS Thapsi.

*Mullein Fox-glove.**DIDYNAMIA Angiospermia.*

Calyx in 5 segments. *Corolla* bell-shaped, 4- or 5-cleft, inflated. *Capsule* ovate, of 2 cells, with many seeds.

Segments of the calyx oblong. *Corolla* obtuse, its upper lip undivided. Leaves downy, decurrent.

Digitalis Thapsi. Linn. *Sp. Pl.* 867. Mill. *Dict. n.* 2. Ait. *H. Kew.* v. 2. 345. Allion. *Pedem.* v. 1. 70.

D. angusto verbasci folio montana. Bocc. *Mus.* v. 1. 108. t. 85. f. ult.

D. verbascifolia purpurea minor perennis hispanica. Barrel. *Ic.* t. 1183.

BOCCONE appears to be the only writer who has given an account of this species from wild specimens observed by himself. Barrelier has copied his figure, the only one extant. The plant is a native of the mountains of Tuscany and Savoy, as well as of Spain. Miller alone seems to have cultivated it in England. The history of its recent introduction among us will be best given in the words of Mr. Lambert, to whom we are obliged for a fresh specimen.

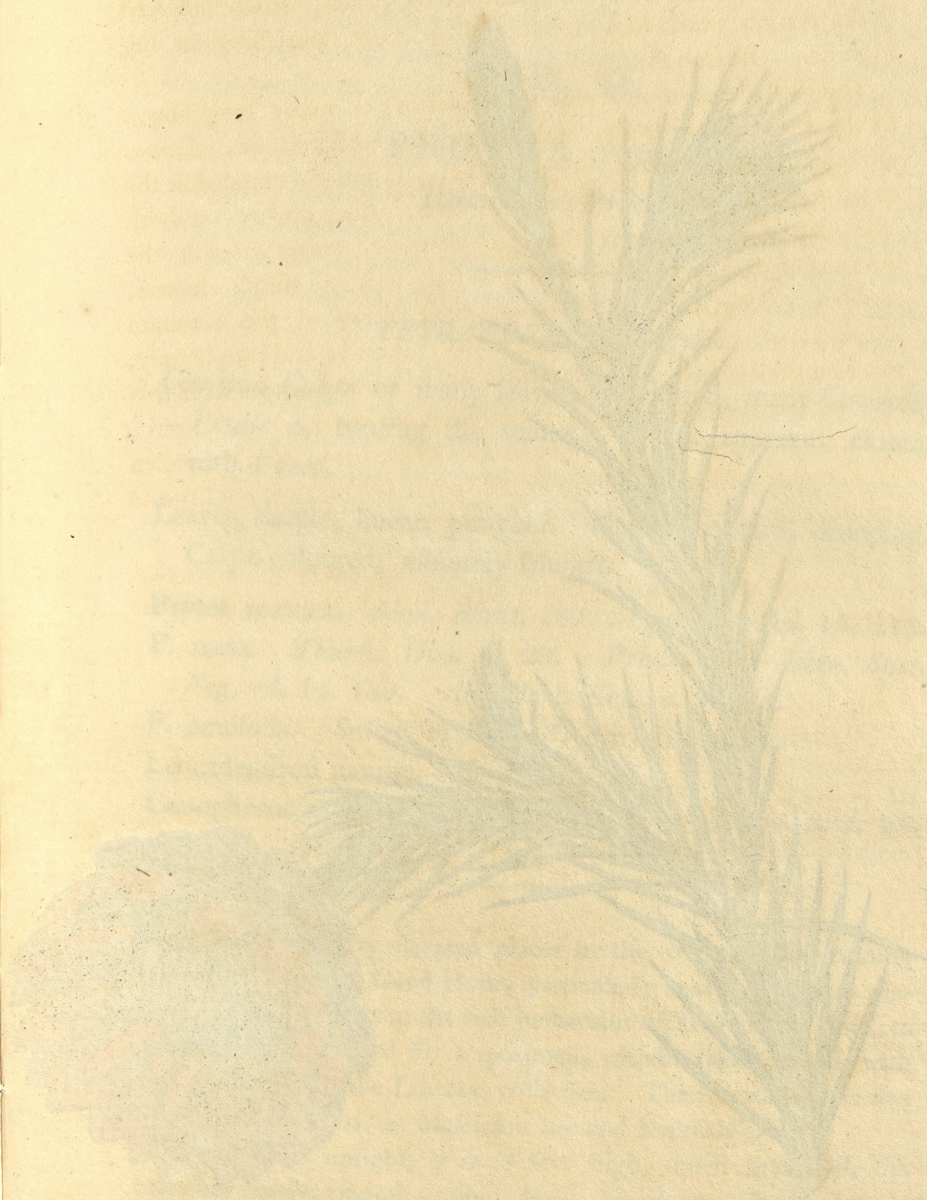
“*Digitalis Thapsi* has been long lost to our gardens, I believe ever since Miller’s time. Mr. Ferdinand Baver, when collecting species for his intended Monography of the genus, sought it in vain in every curious garden about the Metropolis. This made me very anxious to obtain the plant from Spain, as it was almost the only known species wanting to our collections. On writing to my much-lamented friend Cavanilles, I received from him one small dried specimen, on which were luckily two ripe capsules. From these I collected many seeds, of which only two vegetated.

"By dividing the roots I obtained several plants, which flowered
 "the second year, May 1805, and are now flourishing in my
 "garden at Boyton."

The root seems to be perennial, consisting of many long fibres. Stems several, 1 or 2 feet high, branched, leafy, round. Leaves all sessile and decurrent, elliptic-oblong, bluntish, rounded at the base, serrated, veiny, with several lateral ribs, downy on both sides, of a palish green; they are alternate, except those at the bottoms of the branches. Flowers in long terminal simple clusters, smaller, paler, and less specious, than those of the common *D. purpurea*, their internal specks being minute and purple only, not beautifully ocellated. The form of the corolla agrees with that species, but the calyx-lobes are somewhat narrower.

Linnæus supposed this might be a mule produced from the pollen of *Verbascum Thapsus* falling on *D. purpurea*; but we see little to countenance the supposition.

a shows the stamens and pistil separated from the rest of the flower.





Protea rosacea

Aug 2. 1805. Published by Jas. Sowerby, London.

TAB. 44.

PROTEA rosacea.

*Rosaceous Protea.**TETRANDRIA Monogynia.*

Common Calyx of many leaves, imbricated, many-flowered.

Petals 4, bearing the stamens. *Nut* superior, closed, with 1 seed.

Leaves simple, linear, pungent. Flowers solitary, drooping.
Calyx coloured, minutely fringed.

Protea rosacea. Linn. Mant. 189. Syst. Veg. ed. 13, 118.

P. nana. Thunb. Diss. n. 29. Prodr. 26. Linn. Syst. Veg. ed. 14, 139. Ait. Hort. Kew. v. 3, 484.

P. acuifolia. Salisb. in Hooker's Paradisus, t. 2.

Leucadendron nanum. Berg. Cap. 22.

Conophoros capensis pini folio. Pet. Gazoph. dec. 3, t. 25.
f. 7.

A NATIVE of dry elevated places by the rivers of the country about the Cape of Good Hope, particularly near Rood Zands cascade, as we learn from the rich herbarium of G. Hibbert, Esq., to whom we are obliged for a specimen, which exactly accords with that of Bergius in the Linnæan collection. The annexed figure was drawn in May 1805, at Messieurs Lee and Kennedy's.

The stem is upright, 2 or 3 feet high, much branched, the branches tawny, smooth, round, leafy, loosely spreading. Leaves numerous, scattered, imbricated, sessile, simple, scarcely an inch long, linear, entire, smooth, each tipped with a sharp spine. Flowers terminal, solitary, drooping, of an elegant rosaceous form and colour, the imbricated spreading leaves of the calyx being of a shining crimson, their edges finely fringed. The numerous florets form a dense cone, shorter than the calyx. They are reddish,

fringed with golden hairs. The styles of the outermost first release themselves from the confinement of the closed tips of the corolla, and are smooth, yellow and rigid, each bearing an oblong sulcate style.

The excellent Thunberg probably called this plant *nana* out of respect to Bergius's original name; but that being found, on further observation, peculiarly inapplicable, surely the Linnæan denomination *rosacea*, which is nearly of the same date, ought to be retained. Thunberg himself says "the plant is known at first sight by the resemblance of its flowers to a rose." We have therefore no occasion to adopt, or to criticise, *acutifolia*. Mr. Hooker, or rather his colleague Mr. Salisbury, has made an unexpected attack upon us in their preface*; and we perceive something from the same quarter, given to the world in a more learned form† by an intimate and highly respected friend of the gentleman last named. We believe the science will be benefited by our friend's talents, in whatever way they are directed. The more moderate he is in his triumphs over us poor Linnæans, the more resplendent and unsullied will be his own fame.

* "In all similar publications which have hitherto appeared, not even excepting the most respectable, a considerable portion of each page has been filled with *useless repetitions* of the classes, orders and generic characters of the sexual system."—*Hooker's preface*.

† "Observationes de affinitatibus addidit Salisburius, qui *ferè solus* apud nos *eandem* curat et studet."—*Rudge Pl. Guian. præf. p. 6*.



Campanula gracilis

Aug. 1. 1805. Published by Jas. Sowerby, London.

TAB. 45.

CAMPANULA gracilis.

*Slender Roughish Bell-flower.**PENTANDRIA Monogynia.*

Corolla bell-shaped, closed at the bottom by valves bearing the stamens. *Stigma* 3-cleft. *Capsule* inferior, of 3 or 5 cells.

Leaves rough, linear-lanceolate; the lower ones bluntly toothed. Stem round, much branched. Flowers solitary, terminal; their tube shorter than the calyx-teeth.

Campanula gracilis. *Forst. Prodr.* 15. *Willden. Sp. Pl.* v. 1. 891.

DRAWN from a plant which flowered in Lady Hume's collection last summer, and which was raised from seeds collected in New South Wales. We have compared our specimens, both wild and cultivated, with the original one of Forster in Sir Joseph Banks's possession, and find no difference, except that in his the calyx is not hairy.

The stem is a foot or more in height, much branched, leafy, round, two-edged. Leaves linear-lanceolate, obtuse; the lower ones opposite, bluntly toothed; the rest scattered and entire. Flowers erect, solitary, on long terminal naked stalks. Calyx globose, generally rough with deflexed hairs; its teeth awl-shaped, longer than its body, or than the tube of the flower. Corolla slender and funnel-shaped, of a rich blue within, paler without; its segments acute, fringed, sometimes only 4. Capsule of 3 cells, opening by 3 valves at the summit. Every part of the herbage is rough with very short rigid pubescence.

We have Monsieur Ventenat's *C. vincaeflora*, *Jard. de la Malmaison*, t. 12, which seems to us a distinct species, being smooth, except some scattered longish bristles on the leaves, and having a wider flower, with much shorter calyx-teeth, and a less globular capsule than in our plant.

a calyx with stamens and style. *b* corolla. *c* ripe fruit cut across. *D* magnified seed.

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Struthiola virgata

Sept. 1. 1805. Published by J. Sowerby London.

TAB. 46.

STRUTHIOLA virgata.

*Downy-branched Struthiola.**TETRANDRIA Monogynia.*

Calyx none. *Corolla* tubular, thread-shaped, 4-cleft, with 8 glands at the mouth. *Berry* superior, dry, with 1 seed. *Style* lateral. *Stigma* smooth.

Leaves lanceolate, striated, ciliated. Branches and flowers downy.

Struthiola virgata. *Linn. Mant.* 41. *Thunb. Prod.* 76.

THIS is a native of the Cape of Good Hope, for specimens of which we are obliged to Messieurs Lee and Kennedy, who have for some time cultivated it in their greenhouse. It flowers in May, and is fragrant.

Stem 2 or 3 feet high, branched, upright, wand-like; the branches obscurely quadrangular, leafy, clothed with fine short silky hairs. Leaves opposite, imbricated in four rows, sessile, lanceolate, entire, concave, more or less fringed, striated and smooth at the back, with a glaucous hue. Flowers axillary, solitary, sessile, longer than the leaves, with a pair of fringed bracteas at their base. Corolla buff-coloured with a red tinge, silky externally; its tube long and slender; limb spreading; orifice red, bristly and crowned with 8 spreading glands. Stamens 4, short, enclosed in the mouth of the tube. Germen superior, smooth. Style lateral, slender, shorter than the tube. Stigma obtuse, smooth.

Differences of opinion concerning the terms calyx and corolla are endless. We here adopt what appears to be sanctioned by the analogy of other plants.

A magnified flower opened longitudinally, with its bracteas.
B glands. C antheras. D style.

TAB. 46.

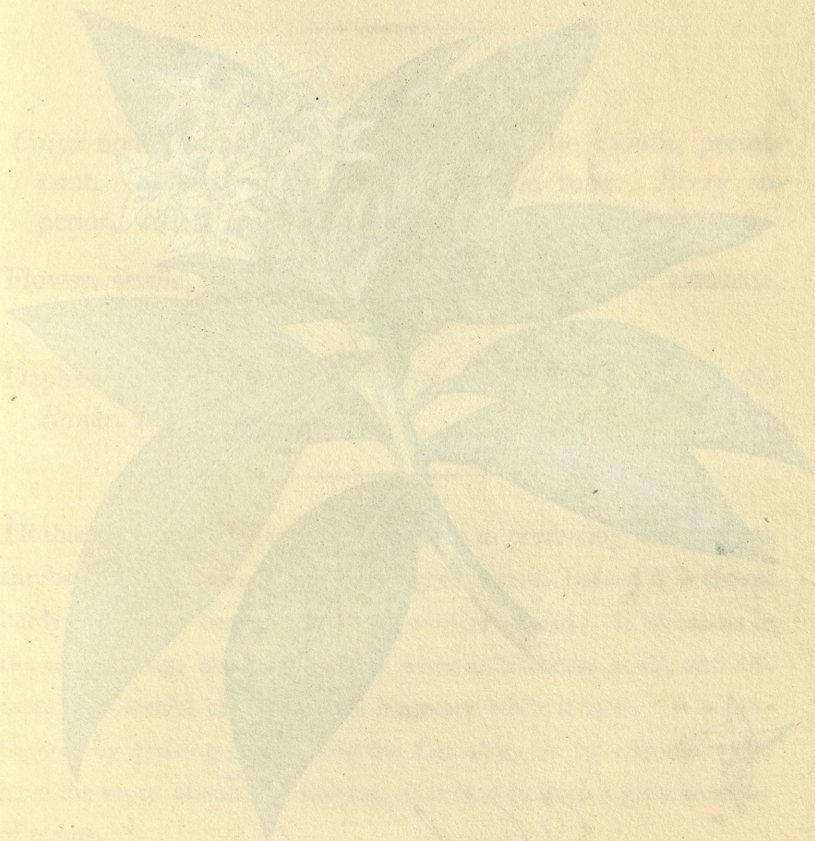
STRUTHIOA virgata.
Downy-branched Struthiola.

TETRAVIRGATA Monophylla.

Copy: none. Corolla tubular, throat-shaped, 4-lobed, with
8 glands at the mouth. Very superior, dry, with 1 seed.
Style lateral. Stigma smooth.
Leaves lanceolate, striated, ciliated. Branches and flowers
downy.
Struthiola virgata. Lin. Mo. 41. Thunb. Bot. 76.

THIS is a native of the Cape of Good Hope, for specimens of
which we are obliged to Messieurs Lee and Kennedy, who have for
some time cultivated it in their greenhouse. It flowers in May, and
is fragrant.
Stems 2 or 3 feet high, branched upright, wand-like; the branches
obtusely quadrangular, leafy, clothed with fine short silky hairs.
Leaves opposite, imbricated in four rows, sessile, lanceolate, entire,
coarse, more or less thickly striated and smooth at the back,
with a glaucous hue. Flowers axillary solitary, sessile, longer than
the leaves, with a pair of fringed bracts at their base. Corolla
half-colored with a red ring, silky externally; its tube long and
slender; limb spreading; lobes red, white, and crowned with a
specious gland. Stamens 4, short, enclosed in the mouth of the
tube. Germen superior, smooth. Style lateral, slender, shorter
than the tube. Stigma obtuse, smooth.
Description of opinion respecting the true color and corolla
we reject. We think that what appears to be sanctioned by the
authority of other writers.

A magnified flower, and a magnified leaf, with its base.
It is a native of the Cape of Good Hope.
1801.





Daphne odora

Sept. 2 1808. Published by T. & S. Sowerby, London.

TAB. 47.

DAPHNE odora.

*Sweet-scented Chinese Daphne.**OCTANDRIA Monogynia.*

Calyx none. *Corolla* 4-cleft, naked at the mouth, permanent. *Stamens* in 2 rows, within the tube. *Berry* superior, with 1 seed. *Stigma* capitate, almost sessile.

Flowers sessile, in terminal clusters. Leaves ovate, alternate, smooth.

Daphne odora. Thunb. Jap. 159. Ait. H. Kew. v. 2. 26.
Banks. Ic. Kæmpf. t. 16.

IF this species of *Daphne* were constant in producing flowers, few shrubs would be more desirable in a greenhouse. Indeed it is almost hardy enough to bear our ordinary winters abroad. It blossoms in the early spring, always copiously when it blossoms at all, and diffuses a powerful and delightful fragrance while it lasts. It is propagated by grafting on the *Daphne Laureola*, or by cuttings. To have the more chance of flowers, it is best to keep a great number of plants.

We are told in the *Hortus Kewensis* that this plant was introduced to our gardens in 1771 by B. Torin, Esq. It is a native of China and Japan. When first known here it was taken for *D. indica*, and so called; but that mistake was set right by a little examination, and the name of Thunberg adopted. Such corrections often make the ignorant complain of changes of names. It is much to be wished that botanists, whose authority ought to be decisive,

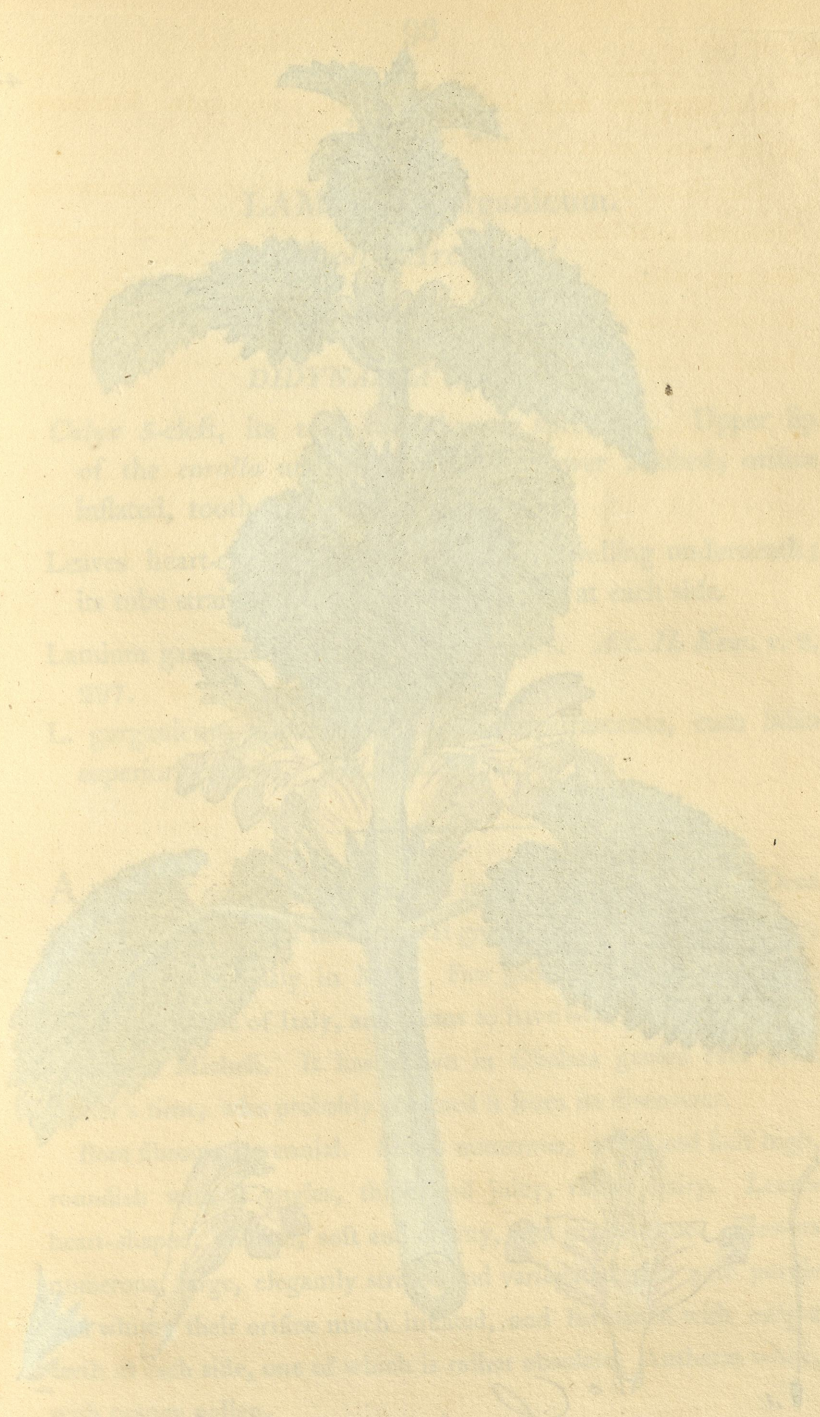
would never give more just cause for such complaints. Erroneous or bad names must and ought to be corrected.

This shrub is smooth, branched, 2 or 3 feet high, with numerous alternate laurel-like leaves. Flowers in dense bracteated terminal clusters, white, often reddish in decay, lasting for 2 or 3 weeks. Berries never ripened in England. Very often the stem becomes broad or fasciculated, producing an inordinate quantity of flowers.

- *a* a flower cut open to show its internal parts.

If this species of *Daphne* were constant in producing flowers, few shrubs would be more desirable in a greenhouse. Indeed it is almost hardy enough to bear our winters without shelter. It blossoms in the early spring, always copiously when it blossoms at all, and fills the air with a powerful and delightful fragrance while it lasts. It is propagated by striking an eye of the *Daphne Laureola*, or by cuttings. To have the more choice of flowers, it is best to keep a great number of plants.

We are told in the *Flora* of *Amoy* that this plant was introduced to our gardens in 1771 by Mr. Forster. It is a native of China and Japan. When first known here it was taken for *D. laureola* and so called; but this mistake was set right by a little examination, and the name of *Linnæa* was adopted. Such corrections often make the ignorant complain of changes of names. It is much to be wished that botanists, whose authority ought to be decisive,





Lamium garganicum

Sept. 2. 1805. Published by Jas. Sowerby, London.

TAB. 48.

LAMIUM garganicum.

*Woolly Archangel.*DIDYNAMIA *Gymnospermia.*

Calyx 5-cleft, its teeth awl-shaped, spreading. Upper lip of the *corolla* undivided, vaulted; lower 2-lobed; orifice inflated, toothed at each side.

Leaves heart-shaped, downy. Corolla swelling underneath; its tube straight; orifice with two teeth at each side.

Lamium garganicum. *Linn. Sp. Pl.* 808. *Ait. H. Kew. v.* 2. 297.

L. garganicum subincanum, flore purpurascente, cum labio superiori crenato. *Till. Pis.* 93. *t.* 34. *f.* 1.

A HARDY ornamental plant, but perhaps too like our wild Dead Nettles to be a general favourite. It grows however without trouble, and flowers copiously in May. Few gardens possess this plant, which is a native of Italy, and seems to have been discovered by the celebrated Micheli. It has grown in Chelsea garden ever since Miller's time, who probably obtained it from its discoverer.

Root fibrous, perennial. Stems numerous, a foot and half high, roundish with 4 angles, thick and juicy, rather hairy. Leaves heart-shaped, crenate, soft and downy, of a greyish hue. Flowers numerous, large, elegantly striped and variegated with pale purple and white; their orifice much inflated, and furnished with only 2 teeth at each side, one of which is rather obsolete. Antheras white, with orange pollen.

a calyx and bractea. *b* corolla and stamens. *c* the same expanded. *d* germen and style.

TAB. 48.

LAMIUM garganicum.

Woolly Stachys.

DIDYMANA Gynandria.

Calyx 5-lobed, its teeth awl-shaped, spreading. Upper lip
of the corolla undivided, vaulted; lower 2-lobed; orifice
inflated, toothed at each side.

Leaves heart-shaped, downy. Corolla swelling underneath;
its tube straight; orifice with two teeth at each side.

Lamium garganicum. Kuhn. Sp. 1. 1. 203. Am. H. Kew. v. 2.

287.

L. garganicum subsp. novum, flore purpurascens, cum labio
superioris 1-lobato. T.M. 1. 1. 203. v. 2. 1.

A HARDY perennial plant, but perhaps too like our wild Dandelion
to be a general favourite. It grows however without trouble,
and flower copiously in May. Few gardens possess this plant,
which is a native of Italy, and seems to have been discovered by the
celebrated Mitchell. It has grown in Chelsea garden ever since
Miller's time, who probably obtained it from its discoverer.

Root fibrous, perennial. Stems numerous, a foot and half high,
roundish with 4 angles, thick and jointed, rather hairy. Leaves
heart-shaped, entire, soft and downy, of a greyish hue. Flowers
numerous, large, elegantly shaped and variegated with pale purple
and white; their orifice much inflated, and furnished with only 2
teeth at each side, one of which is rather obtuse. Anthers white,
with orange pollen.

Corolla and pedicel. 5 corolla and stamens. 5 the same.
pedicel. 4 germin and style.





Uvularia perfoliata

Sept. 1. 1845. Published by J. E. Smith, London.

TAB. 49.

U V U L A R I A perfoliata.

Pale Perfoliate Uvularia.

HEXANDRIA Monogynia.

Corolla of 6 upright petals. *Nectary* a chink in the base of each. *Filaments* very short.

Leaves perfoliate, elliptical, obtuse. *Corolla* bell-shaped, rough on the inside. *Antheras* pointed.

Uvularia perfoliata. *Linn. Sp. Pl.* 437. *Ait. H. Kew. v. 1.* 434.

A NATIVE of North America, said to have been introduced among us by the celebrated Peter Collinson in 1734. It thrives well in moist shady gardens, flowering in May. We have received it from Chelsea garden.

Root perennial, of several fleshy fibres. Stem herbaceous, annual, erect, about a foot high, round, smooth, leafy, often a little branched or subdivided. Leaves alternate, perfoliate, elliptical, entire, obtuse with a slight point, ribbed, smooth on both sides, paler beneath, flat, not waved, at the base. Flowers terminal, solitary, pendulous, on short stalks. Petals scarcely above half an inch long, of a very pale greenish buff-colour, their inner side rough with yellowish protuberances. *Antheras* tipped with a small point or awn. *Nectary* very small and linear.

a, a inner side of the petals. *b, b* stamen. *c* germen and style.
D stigma.

TAB. 49.

UVULARIA perfoliata.
Pale Perfoliate Uvularia.

HEXANDRIA Monogynia.

Corolla of 6 upright petals. Nectary a chink in the base of each. Filaments very short.

Leaves perfoliate, elliptical, obtuse. Corolla bell-shaped, rough on the inside. Anthers pointed.

Uvularia perfoliata. Ann. Sp. Pl. 437. Alt. H. Kew. v. 1. 434.

ANATIVE of North America, said to have been introduced among us by the celebrated Peter Collinson in 1734. It thrives well in moist shady gardens, flowering in May. We have received it from Chelsea garden.

Root perennial, of several fleshy fibres. Stem herbaceous, annual, erect, about a foot high, round, smooth, leafy, often a little branched or subdivided. Leaves alternate, perfoliate, elliptical, entire, obtuse with a slight point, ribbed, smooth on both sides, pale beneath, flat, not waved at the base. Flowers terminal, solitary, pendulous on short stalks. Petals scarcely above half an inch long, of a very pale greenish buff colour, their inner side rough with yellowish protuberances. Anthers tipped with a small point or awn. Nectary very small and linear.

as a inner side of the petals. A. a stamen, a germen and style. D stigma.





Uvularia flava

Sept. 2. 1805. Published by J. G. Sowerby, London.

TAB. 50.

UVULARIA flava.

Small Yellow Uvularia.

HEXANDRIA Monogynia.

Corolla of 6 upright petals. *Nectary* a chink in the base of each. *Filaments* very short.

Leaves perfoliate, elliptic-oblong, bluntish, waved at the bottom.

Corolla tapering at the base, rough on the inside. *Antheras* pointed.

Uvularia caule perfoliato. Gron. Virg. 51, ex descr. clay-tonianâ.

THIS has also been brought from North America to our gardens, where it flowers in May or early in June.

Many persons suppose it a variety of the plant in our last plate, but we presume them to be distinct, though it is very difficult to express a specific distinction. As the whole genus is at present a mass of confusion in authors, the species not well defined and the synonyms glaringly misapplied, we cannot at once expect to elucidate the subject completely.

In this the leaves are rather oblong, and much inclined to be revolute. Their base which surrounds the stem is waved. The flower is remarkably different, larger, more taper and elongated, with narrower sharper petals, an inch long, yellow, with orange-coloured tubercles on the inside. The point of the anthera is also longer and more conspicuous.

a, a, a inner side of petals. *b, B* stamen with its anthera and point. *c* germen and style.





Uvularia grandiflora.

TAB. 51.

UVULARIA grandiflora.

*Large Yellow Uvularia.**HEXANDRIA Monogynia.*

Corolla of 6 upright petals. *Nectary* a chink in the base of each. *Filaments* very short.

Leaves perfoliate, oblong, acute. Petals smooth on both sides.

Antheras almost pointless. Nectary roundish.

Polygonatum ramosum flore luteo majus. *Cornut. Canad.* 38.
t. 39?

Sigillum indicum flore luteo. *Stap. in Theophr.* 1067. *f.* 3.

RECEIVED from North America by Messieurs Lee and Kennedy, in whose garden at Hammersmith we have observed it for three years past, flowering in the beginning of May.

It differs from our *U. flava*, *t.* 50, in being nearly twice as large, the leaves much more oblong, more undulated at the base, and more pointed at the end. The flowers are of a brighter yellow. Petals much above an inch long, smooth on both sides, more conspicuously ribbed. Nectary roundish. Antheras longer and more linear, either quite destitute of any point, or with merely the rudiments of a small awn.

It thrives with the same kind of treatment as the two preceding, but flowers nearly a month earlier.

We find the lowermost flower commonly with only 5 petals, 5 stamens, and 2 stigmas. Bodæus à Stapel, in the place above quoted, describes his plant as having 5 petals.

a, *a* petals. *b*, *B* nectary. *c*, *c* stamens. *d* germen and style.

TAB. 51

UVULARIA stratiiflora
Large Yellow Uvularia

HEXANDRIA Monogamia

Corolla of 6 upright petals. Nectary a circle in the base of each. Filaments very short.
Leaves petiolate, oblong acute. Petals smooth on both sides.
Anthers almost pointless. Nectary roundish.
Polygamum ramosum flore lutea nigra. C. W. C. 1887.
Sigillum indicum flore luteo. Steph. in Theophr. 1887.

RECEIVED from North America by Messrs. Lee and Kennedy, in whose garden at Hammett, Ohio, we have observed it for years past, flowering in the beginning of May.
It differs from our U. flava, 1. 20, in being nearly twice as large, the leaves much more oblong, more undulate at the base, and more pointed at the end. The flowers are of a brighter yellow. Petals much above an inch long, smooth on both sides, more conspicuously ribbed. Nectary roundish. Anthers longer and more linear, either quite destitute of any point, or with merely the rudiments of a small awn.
It thrives with the same kind of treatment as the two preceding, but flowers nearly a month earlier.
We find the lowest flower commonly with only 3 petals, 3 stamens, and 3 styles. Below a single in the place above quoted, describe the plant, showing 3 petals, 6 a petals, 4 B nectary, 6 a stamens, 4 stamens and style.



Uvularia sessilifolia

Det. & Des. Published by J. & S. Edwards, London.

TAB. 52.

U V U L A R I A sessilifolia.

*Sessile-leaved Uvularia.**HEXANDRIA Monogynia.*

Corolla of 6 upright petals. *Nectary* a chink in the base of each. *Filaments* very short.

Leaves sessile. Petals smooth. Nectary oblong.

Uvularia sessilifolia. Linn. *Sp. Pl.* 437. Willden. *Sp. Pl.* v. 2. 95. Donn. *Cant.* 58.

DRAWN on the 3d of June 1805 in the nursery of Messieurs Lee and Kennedy, who received it from North America. It is not mentioned in the *Hortus Kewensis*. Mr. Donn says it came into this country in 1791. Linnæus had his specimen from Kalm, and we find no further account of the species than what he has given, nor does it seem to be any where figured.

In size, and colour of the flower, this plant most accords with *U. perfoliata*, but in general habit it more resembles our *grandiflora*. From both it essentially differs in having sessile, not perfoliate, leaves, which are of an elliptic-lanceolate form, scarcely perceptibly downy beneath. The petals are ribbed, always 6, smooth on both sides. Nectary oblong. Antheras pointless.

It requires the same treatment as the two species above mentioned, and flowers with the *perfoliata*.

a outer petal. *b* inner petal. *c* germen and style, with 2 of the stamens.

TAB. 52.

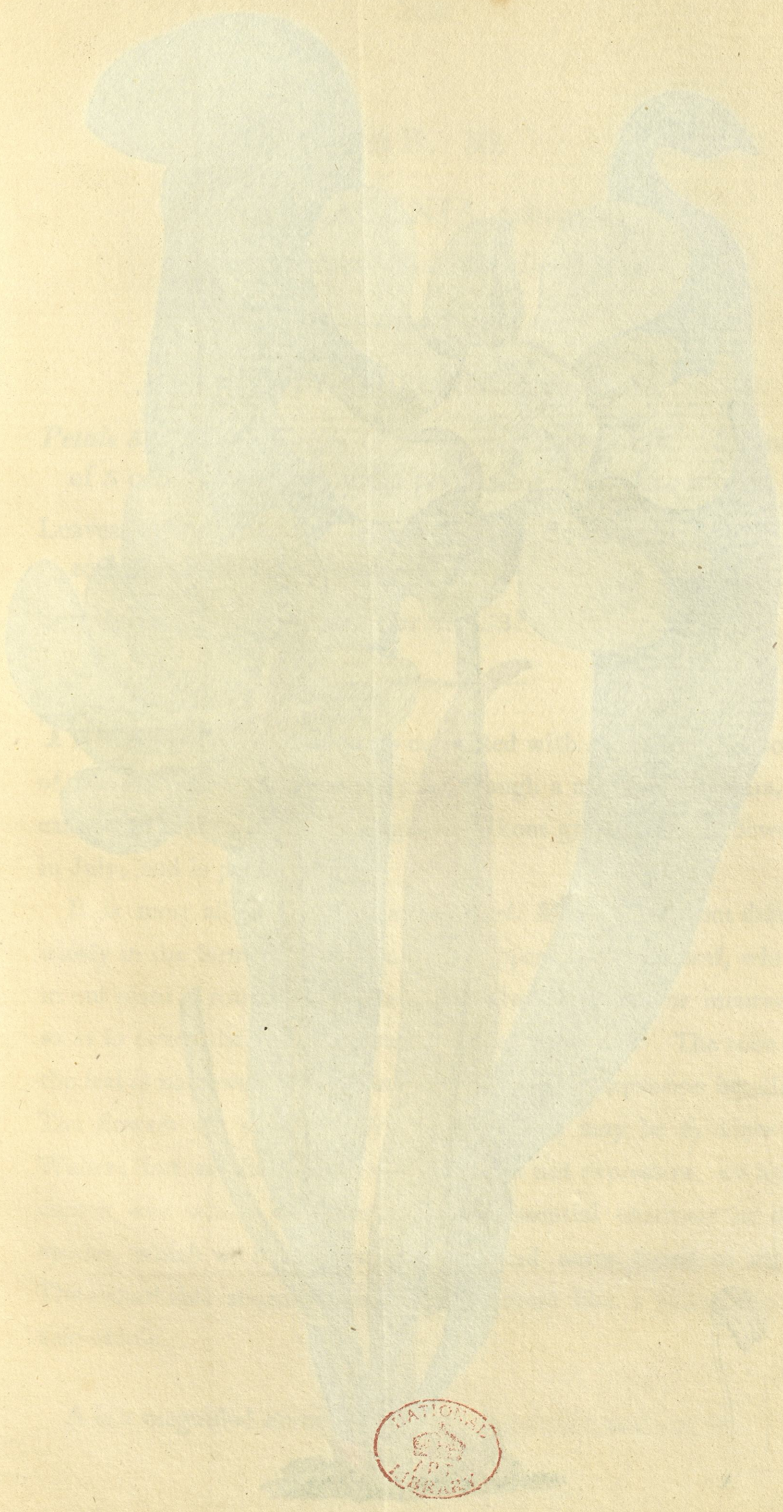
UVULARIA sessilifolia.
Sessile-leaved Uvularia.

HEXANDRIA Monogynia.

Corolla of 6 upright petals. Nectary a chink in the base of each. Filaments very short.
Leaves sessile. Petals smooth. Nectary oblong.
Uvularia sessilifolia. Linn. Sp. Pl. 487. Willd. Sp. Pl. v. 2. 52. Donn. Cat. 58.

DRAWN on the 2d of June 1805 in the nursery of Messieurs Lee and Kennedy, who received it from North America. It is not mentioned in the Florula Kewensis. Mr. Donn says it came into this country in 1791. I am sure had his specimen from Kalm, and we find no further account of the species than what he has given, nor does it seem to be any where figured.
In size, and colour of the flower, this plant most nearly with U. perfoliata, but in general habit it more resembles our grandiflora. From both it essentially differs in having sessile, not petiolate leaves, which are of an elliptic-lanceolate form, scarcely perfoliate downy beneath. The petals are ribbed, always 6, enclose on both sides. Nectary oblong. Anthers pointed.
It requires the same treatment as the two species above mentioned, and flowers with the grandiflora.

a outer petal. 6 inner petals. 6 germs and style, with 2 of the
filaments.





Sarracenia adunca

TAB. 53.

SARRACENIA adunca.

Hook-leaved Side-saddle-flower.

POLYANDRIA Monogynia.

Petals 5. Outer Calyx of 3 leaves; inner of 5. Capsule of 5 cells, sheltered by the permanent shield-like stigma.

Leaves cylindrical, the length of the flower-stalk; with a roundish inflexed appendage.

Sarracenia minor. Walt. Carol. 153?

THIS has been for some years cultivated with success in the stove of Messieurs Lee and Kennedy; for though a native of Carolina, it cannot be kept in health in England without great care. It flowers in July, and is perennial.

It is most allied to *S. flava*, see *Curt. Mag. t. 780*, but differs widely in the form and position of the appendage to the leaf, which in our plant is roundish, vaulted, and always hooked or incurved, so as to cover the orifice beneath, and exclude rain. The tube of the leaf is narrower than in *flava*, and the lateral expansion broader. The flowers are smaller. We presume this may be *S. minor* of Walter; but as the name is uncertain and not expressive, we have chosen one which expresses the very essential character of the species, which we have often observed and never found to vary. The remarkable stigma of this genus is more like a pillion than a side-saddle.

A is a magnified stamen with its singularly-formed anthera.

TAB. 53.

SARRACENIA adnata.
Hook-kneed Side-saddle-flower.

POLYANDRIA Monogynia.

Petals 5. Outer Corolla of 8 leaves; inner of 5. Corolla
of 5 cells, sheltered by the permanent shield-like stigma.
Leaves cylindrical, the length of the flower-stalk, with a
roundish inflexed appendage.

Sarracenia minor. Wall. Cat. 1483.

This has been for some years cultivated with success in the stove
of Messieurs Lee and Kennedy; for though a native of Carolina, it
cannot be kept in health in England without great care. It flowers
in July, and is perennial.

It is most allied to *S. minor*, see Cat. Mag. A. 750, but differs
widely in the form and position of the appendage to the leaf, which
in our plant is roundish, vaulted, and always hooked or incurved,
so as to cover the entire breadth, and exclude rain. The tube of
the leaf is narrow, or than in *S. minor*, and the lateral expansion broader.
The flowers are smaller. We presume this may be *S. minor* of
Walley; but as the name is uncertain and not expressive, we have
chosen one which expresses the very essential character of the
species, which we have often observed and never found to vary.
The remarkable stigma of this genus is here like a pillion that a
side-saddle.

A is a magnified stamen with its singularly-formed anthers.





Besleria melittifolia

Oct. 1. 1852. Published by Jas. Sowerby, London.

TAB. 54.

BESLERIA melittifolia.

*Balm-leaved Besleria.**DIDYNAMIA Angiospermia.*

Calyx in 5 deep segments. *Berry* roundish, of 1 cell, with many seeds.

Flower-stalks branched. Leaves ovate.

Besleria melittifolia. *Linn. Sp. Pl.* 862. *Donn. Cant.* 115.

B. melissæ *Tragi folio.* *Plum. Ic.* 36. t. 48.

WE were shown this plant by our worthy friend the late Mr. Lee of Hammersmith, for the first time, in 1789, when it was in flower in his stove. Mr. Donn therefore has erroneously marked 1793 as the year of its introduction. We have not observed it in any other collection. It is a native of South America, and flowers with us in June or July.

It is a low shrub of luxuriant growth and juicy texture. The stem is round, branched, downy. Leaves opposite, on long stalks, ovate, acute, crenate, decurrent, veiny, downy, pale beneath. Flower-stalks axillary, divided or somewhat umbellate, downy, with acute bractæ at their subdivisions. Calyx-leaves ovate, slightly serrated. Corolla purple, with a straight tube, and spreading limb in 5 obtuse segments. Stamens and style shorter than the tube. The berry we have not seen.

This genus was named by Plumier in honour of Basil Besler, the editor of the unwieldy *Hortus Eystettensis*.

A dissection of the flower having been neglected at the time of the drawing, we can only give a general view of this rare plant.

TAB. 54

BESLERIA mollis (Lam.)

B. mollis (Lam.)

B. mollis (Lam.)

Calyx in 5 deep segments. Berry roundish of 1 cell, with many seeds.

Flower-stalks branched. Leaves ovate.

Besleria mollis (Lam.) B. 802. Lam. Cat. 113.

B. mollis (Lam.) B. 802. Lam. Cat. 113.

We were shown this plant by our worthy friend the late Mr. J. C. H. in his story. He found it in the garden of the late Mr. J. C. H. in his story. We have not observed it in any other collection. It is a native of South America, and flowers with us in June or July.

It is a low shrub of luxuriant growth and juicy texture. The stem is round, branched, woody. Leaves opposite, on long stalks, ovate, acute, serrate, downy, waxy, downy, pale beneath. Flower-stalks axillary, divided or umbel-like umbellate, downy, with acute bristles at their subdivisions. Calyx-leaves ovate, slightly serrated. Corolla purple, with a straight tube, and spreading limb in a cone opposite. Stamens and style shorter than the tube. The berry we have not seen.

This genus was named by Planchon in honour of Paul Besler, the author of the first book on the subject.

A specimen of the flower having been neglected at the time of the drawing, we can only give a general view of this rare plant.

TAB. 33

MELEALEUCA *gambicola*

Broom-leaved Melaleuca

POLYANTHUS

Calyx 3-lobed, half superior, lobes very long, united into a tube. Capsule 3-2 cells.

Leaves scattered, lanceolate, three-ribbed, closely branched.

Melaleuca *gambicola*

This species is native to the coast of Australia from Port Jackson to the Cape of Good Hope. It grows in the salt-marshes and is very common. It was first brought to England in 1791 by Captain Cook and his crew.

The plant is a small tree or shrub 10 to 20 feet in height, in good soil and with much water. It has a very thick, woody stem.

The leaves are very small, lanceolate, and scattered. The flowers are small, white, and very numerous. They are arranged in dense, terminal panicles.

The fruit is a small, round capsule, which is covered with a thick, waxy substance.

The plant is very common in the salt-marshes of Australia and is used for many purposes.





Melaleuca genistifolia ^D

Oct. 1805. Published by Jas. Sowerby, London.

TAB. 55.

MELALEUCA *genistifolia*.*Broom-leaved Melaleuca.*

POLYADELPHIA Polyandria.

Calyx 5-cleft, half superior. *Petals* 5. *Filaments* numerous, very long, united into 5 parcels. *Style* 1. *Capsule* of 3 cells.

Leaves scattered, lanceolate, sharp-pointed, three-ribbed, closely dotted. Flowers loosely scattered, on terminal branches. Filaments branched towards the extremity.

Melaleuca genistifolia. *Sm. Trans. of Linn. Soc. v. 3. 277.*

THIS species of *Melaleuca* was sent to Sir Joseph Banks from Port Jackson by the late Mr. David Burton. It is unknown in the gardens, but we have a drawing of it among those brought to England by Dr. White, which we have compared with our specimens. To this drawing the following account is annexed :

“ The White Tea Tree grows about 20 or 25 feet in height, in good soil and mostly near the water side. When in blossom it is nearly white. Flowers in November.”

The branches are slightly angular, smooth. Leaves scattered, on short foot-stalks, lanceolate, entire, sharp-pointed, scarcely half an inch long, marked with 3 obscure ribs, and sprinkled all over with minute resinous dots. They have an agreeable, but not strong, aromatic flavour. Flowering branches slightly downy. Flowers sessile, in alternate pairs, white. Claws of the stamens about as long as the petals (not twice as long) before they branch. Style hairy.

A a leaf. B calyx and style. C petal. D stamen. All magnified.

TAB. 52.

METALUCA geniculata.

Brown-leaved Metaluca.

POLYDEPHEIA foliolosa.

Calyx 5-lobed, half superior. Petals 5. Filaments numerous, very long, united into 2 pairs. Style 1. Capsule of 2 cells.

Leaves scattered, lanceolate, sharp-pointed, three-nerved, closely bound. Flowers loosely scattered, on terminal branches. Filaments protruded towards the extremity.

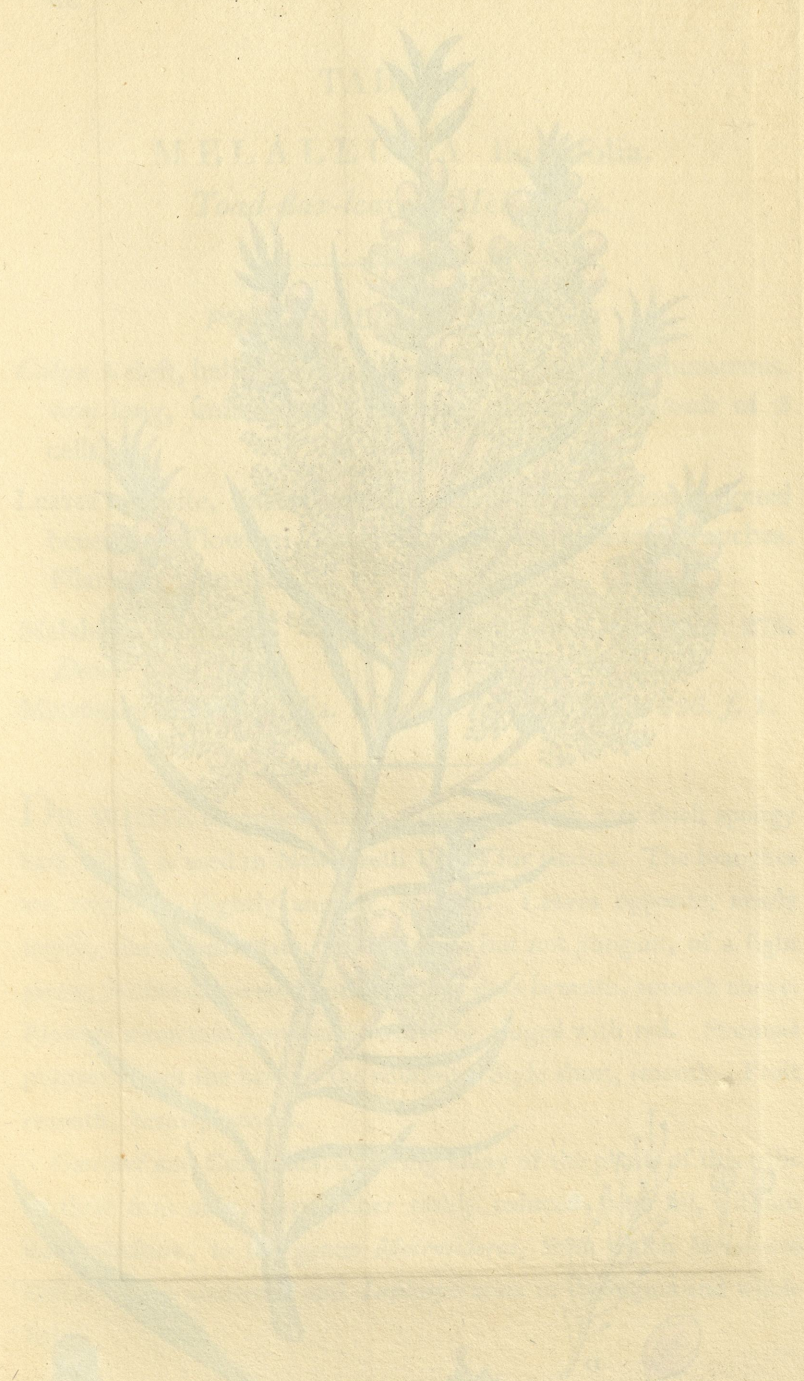
Metaluca geniculata. In the flower of the flower. 5. 5. 5.

This species of Metaluca was sent to St. Joseph Banks from Port Jackson by the late Mr. David Burton. It is unknown in the garden, but we have a drawing of it among those brought to England by Dr. W. B. which we have compared with our specimens. To this drawing the following account is annexed:

"The White Tree grows about 20 or 25 feet in height, in good soil and mostly near the water side. When in blossom it is nearly white. Flowers in November."

The branches are slightly angulate, smooth. Leaves scattered, on short foot-stalks, lanceolate, entire, sharp-pointed, scarcely half an inch long, marked with a obscure rib, and sprinkled all over with minute reticulate dots. They have an agreeable, but not strong aromatic flavour. Flowering branches highly downy. Flowers sessile, in alternate pairs, white. Claws of the stamens about as long as the petals (not twice as long) before they branch. Style hairy.

A a leaf. B calyx and style. C petal. D stamen. All magnified.





Melaleuca linariifolia

TAB. 56.

MELALEUCA *linarifolia*.*Toad-flax-leaved Melaleuca.**POLYADELPHIA Polyandria.*

Calyx 5-cleft, half superior. *Petals* 5. *Filaments* numerous, very long, united into 5 parcels. *Style* 1. *Capsule* of 3 cells.

Leaves opposite, linear-lanceolate, three-ribbed, closely dotted beneath. Flowers loosely scattered on terminal branches. Filaments pinnated.

Melaleuca linarifolia. *Sm. Trans. of Linn. Soc. v. 3. 278.*
Donn. Cant. 144.

Metrosideros hyssopifolia. *Cavan. Ic. v. 4. 20. t. 336. f. 1.*

DR. WHITE describes this as a large tree with very thick spongy bark which is used in New South Wales for tinder. The branches are round or slightly angular, smooth. Leaves opposite, nearly sessile, linear-lanceolate, entire, acute but not pungent, of a light green, 3-ribbed, covered with resinous dots beneath, smooth above. Flowers numerous, opposite, white or tinged with red. Stamens pinnated from the base to the summit. Style short, smooth. Fruit smooth, hemispherical.

Gærtner and Cavanilles, knowing many of the plants of this tribe by their fruit only, have rather rashly reduced them all, without discrimination, to the genus *Metrosideros*, from which *Melaleuca* differs in its stamens, and *Leptospermum* in its stigma and whole habit.

A leaf. B calyx and style. C petal. D stamen. E separate filaments. All more or less magnified. *f* fruit of the natural size.



Roxburghia viridiflora.

Nov. 1. 1805. Published by Jas Sowerby, London.



Illustration. All more or less magnified. A part of the natural size.
A. leaf. B. calyx and style. C. petal. D. stamen. E. pistil.

TAB. 57.

ROXBURGHIA viridiflora.

*Green-flowered Roxburghia.**TETRANDRIA Monogynia.*

Petals 4, spreading. *Filaments* lanceolate, keeled, bearing the *antheras* on their inside, crowned with an appendage. *Capsule* superior, with 1 cell, 2 valves, and many *seeds*.

Roxburghia gloriosoides. *Roxb. Pl. of Coromandel*, v. 1. 30.
t. 32?

ROOTS of this singular plant were sent by Dr. Roxburgh to Lady Hume, from the coast of Coromandel, some time since. Being cultivated in a stove, they flowered last April, for the first time in Europe.

They were marked *Roxburghia gloriosoides*, and were presumed to belong to the very species figured and described by Dr. Roxburgh in his work on Coromandel Plants, vol. 1. t. 32. But on comparing his beautiful figure with our specimens, it seems not improbable that there may be more than one species of *Roxburghia*. There is no doubt however concerning the genus, which is very curious and distinct, and justly bears the name of its worthy discoverer. We have given our plant a new specific name, not only on account of the above uncertainty, but because the termination *oides* properly belongs to words derived from the Greek.

The roots are perennial, tuberous and fleshy. Stem climbing to the height of 12 or 15 feet, without tendrils, spiral, angular, smooth, branched, leafy. Lower leaves alternate to the height of about 5 feet, the rest opposite; all spreading, on smooth channelled foot-stalks, ovate, pointed, entire, smooth, thin and pliable, with about 7 or 9 ribs, and innumerable fine transverse veins. Stipulas none. Flower-stalks axillary, solitary, shorter than the leaves, smooth, curved downwards, branched, each bearing 2, 3 or 4 flowers. Bractees solitary under each branch, lanceolate, acutely

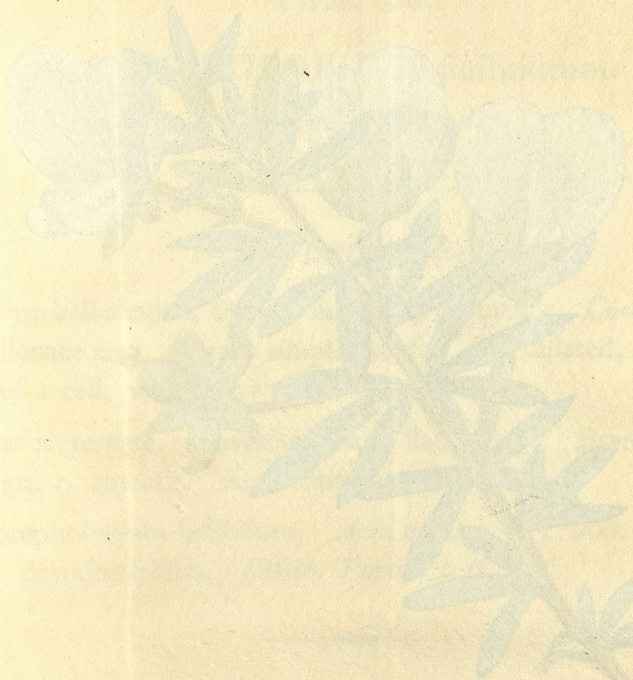
pointed. Flowers ascending, each on a short thick recurved partial stalk, not striking in colour, but very remarkable for their offensive smell, which is like that of rotten cheese, corrupted water, or the stinking morel, *Phallus fœtidus*. Calyx none. Petals four, near two inches long, spreading, equal, regular, lanceolate, acute, many-ribbed, green, their ribs of a dull purple on the upper side. Filaments opposite to the petals and nearly as long, awl-shaped, fleshy; dull purple in their lower part; green above; furrowed on their inside, below the middle, so as to form a double cell. Anthera of two separate linear deep-violet lobes, one lodged in each cell of the filament, and crowned by one common lanceolate green furrowed appendage, like an abortive anthera, and which we dare not call (with Dr. Roxburgh) a nectary. The pollen is of a dark violet colour, and soon falls to the bottom of the flower, where it rolls about like quicksilver. Germen superior, small, sessile, ovate, green. Stigma sessile, roundish. The capsule of this genus, according to Dr. Roxburgh, consists of 2 concave valves, with one cell, and many upright, cylindrical, furrowed seeds, each on a stalk clothed with little vesicles. In his plate the flowers are but half the size of ours, on erect stalks; the petals of a tawny yellow; antheras yellow; leaves heart-shaped; differences which surely indicate a distinct species.

We have no difficulty in referring *Roxburghia* to the order of *Asparagi* in Jussieu, to many genera of which it betrays a manifest affinity. The analogies of these genera have helped us to denominate the parts of the flower, which at first sight is by no means easy.

a filament. *b* one of the lobes of the anthera. *c* pollen fallen out. *d* appendage to the anthera. *e* barren point of the filament, *f* germen. *F* magnified section of the germen.

THE

ILLUSTRATION



Corolla papilionaceous, inflated, spherical, with a cord.
 Leaves bipinnate, pinnules linear-lanceolate, acuminate.
 Stems erect, pubescent, hairy, branched at the apex.
 Flowers axillary, large, papilionaceous.

The above is a description of the plant, which is a member of the Leguminosae family, and is found in the mountains of Mexico, Peru, and Ecuador.

The plant is a large, bushy shrub, with a woody stem and a dense, rounded crown. The leaves are bipinnate, with many small, linear-lanceolate pinnules. The flowers are large, papilionaceous, and are borne in the leaf axils. The fruit is a large, inflated, spherical pod, which is covered with a thick, leathery rind.





Gompholobium fimbriatum

Nov. 1. 1805. Published by J. Sowerby, London.

TAB. 58.

GOMPHOLOBIUM fimbriatum.

*Fringed Air-pod.**DECANDRIA Monogynia.*

Calyx bell-shaped, simple, in 5 deep segments. *Corolla* papilionaceous. *Stigma* simple, acute. *Pod* inflated, spherical, of 1 cell, with many seeds.

Leaves ternate, obovato-oblong, flat, veiny. Branches angular, smooth. Keel fringed.

Gompholobium latifolium. *Ann. of Bot. v. 1. 505.*

G. psoraleæfolium. *Salisb. Parad. t. 6.*

THIS, like the species figured in our 5th plate, is a native of New South Wales, near Port Jackson. It flowered this summer at Messrs. Lee and Kennedy's, from whence our figure was taken.

The branches are angular, smooth, minutely dotted. Leaves scattered, ternate, almost sessile; their leaflets smooth, veiny, entire, oblong, approaching to an obovate or wedge shape, sometimes more acute. Stipulas very minute. Flowers on axillary bracteated stalks, generally solitary, large and handsome, remarkable for a dense white woolly fringe which borders their keel, and distinguishes them from all the other species we have seen. Having been informed of another with much broader leaves in the gardens, I have judged it best to change my original name *latifolium*, (not yet become general so as to cause any confusion,) for one expressive of the essential character.

a calyx. *b* keel. *c* standard. *d, d* wings with their slender footstalks. *e* germen and style.

TAB. 38

COMPHOBOLIUM ambiguum

Gray, 1890

DESCENDING BRANCHES

Calyx bell-shaped, simple in 2 deep segments. Corolla papil-
liferous. Stamens simple, anthers 2-lobed, apical.
of 1 cell, with many anthers.
Leaves terete, distichous, flat, veins. Branches an-
gular, smooth. Keel linear.

Comphobolium ambiguum. Gray, 1890

E. psoraleolobum. Gray, 1890

This, like the species figured in our 311 plate is a native of New
South Wales, near Port Jackson. It flowers this summer at
Messrs. Lee and Kennedy's, from whence our figure was taken.
The branches are angular, smooth, upright, branched. Leaves ter-
ete, terete, almost sessile; lower leaves smooth, velvety, entire,
oblong, appearing to be obscurely 3-lobed above, sometimes
more acute. Stipules very minute. Flowers on short pedicels,
stalks, generally solitary, large and numerous, resembling for
dense white woolly fringe which borders their base, and often in
them from the other species we have seen. Having seen in
bushes of another with much broader leaves in the garden, I have
indeed it best to change my one leaf name to this, that yet
because generally so in the collection, and the position of
the essential character.

a calyx, 5-lobed, standard, with wings with their slender lobes
black, green and white.
700. 1

TAIL 30

LEPTOSPERMUM

Ambigua Leptospermum

ROSS ANDERSON

Leaves 3-4-leaf, half super. The leaves are mostly longer than the stem. The leaves are mostly 3-4-leaf.

Leaves linear, the leaves are mostly 3-4-leaf. The leaves are mostly 3-4-leaf.

Leaves linear, the leaves are mostly 3-4-leaf. The leaves are mostly 3-4-leaf.

The leaves are mostly 3-4-leaf. The leaves are mostly 3-4-leaf.

The leaves are mostly 3-4-leaf. The leaves are mostly 3-4-leaf.





Leptospermum ambiguum

Nov. I. 1805. Published by Jas Sowerby, London.

TAB. 59.

LEPTOSPERMUM ambiguum.

*Ambiguous Leptospermum.**ICOSANDRIA Monogynia.*

Calyx 5-cleft, half superior. *Petals* 5, with claws, generally longer than the stamens. *Stigma* capitate. *Capsule* of 4 or 5 cells. *Seeds* angular.

Leaves linear-lanceolate, recurved. *Calyx* nearly smooth; its segments leafy, lanceolate, naked. Stamens longer than the corolla.

Leptospermum ambiguum. *Sm. Trans. of Linn. Soc. v. 3.* 264.
Metrosideros corifolia. *Vent. Jard. de Malm. t. 46.*

A NATIVE of New South Wales, not uncommon in our green-houses, where it blossoms plentifully in the summer months. It differs from all the other species hitherto investigated of the most natural genus *Leptospermum*, in having the stamens longer than the corolla; but the capitate stigma most decidedly distinguishes this genus from *Metrosideros*: see *t. 42*.

The stem is shrubby, much branched; the branches downy. Leaves numerous, alternate, almost sessile, short, linear-lanceolate, entire, acute, more or less recurved and often roughish; aromatic when bruised. Flowers numerous, axillary, solitary, almost sessile, white, with numerous spreading white stamens, by which they are known at first sight. The leaves vary in breadth.

A magnified leaf. B calyx and style. C a stamen still more enlarged.





Dec. 1. 1805. Published by Jas. Sowerby, London.

Cymbidium hyacinthinum

TAB. 60.

CYMBIDIUM hyacinthinum.

*Hyacinthine Cymbidium.**GYNANDRIA Diandria.*

Nectary a lip concave at the base, without a spur. *Petals* 4 or 5, plain at their base. *Lid* vertical. *Flowers* sometimes reversed.

Root tuberous. Leaves lanceolate, many-ribbed. Flowers upright, racemose, on partial stalks. Lip beardless, furrowed, four-lobed.

A NATIVE of the island of Trinidad, for which we are obliged to our liberal friend Thomas Evans, Esq., of the East India House, in whose choice collection it first flowered in the autumn of 1803. It seems not yet to have been noticed by any author, not even in the ample enumeration of species in Dr. Swartz's Treatise on the *Orchideæ*, where this new genus is first established. In natural affinity *Cymbidium* comes nearest to *Dendrobium*, see t. 10, 11, and 12, from which it differs essentially in the want of a pouch or spur in the base of the petals; a character perhaps rather artificial, but in so large and intricate a family any mark which is not variable becomes important.

The root is tuberous and creeping, growing in the earth, not (like many of the genus) on trees, and throwing out long simple fibres. Stems several, erect, short, leafy, perfectly simple. Leaves sheathing, lanceolate, acute, plaited, with many longitudinal ribs. Cluster of flowers terminal, solitary, erect, simple, about a span long, bearing 4 or 5 large flowers on alternate partial stalks, each accompanied by a deciduous sheathing bractea. Petals spreading, purplish red. Lip about half their length; its centre longitudinally furrowed, and variegated with red and white; its border 4-lobed,

purple. Lid of the stamens moveable, partly concealed by the edges of the column.

This species ranges next to *Limodorum tuberosum* and *altum* of Linnæus, and would by him have been referred to that genus.

A shows the lip and column somewhat magnified: B summit of the column, with the lid and stamens still further enlarged.

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67	<i>Humulus lupulus</i>	—	67	<i>Urtica dioica</i>	—	96
68	<i>Humulus lupulus</i>	—	68	<i>Urtica dioica</i>	—	97
69	<i>Humulus lupulus</i>	—	69	<i>Urtica dioica</i>	—	98
70	<i>Humulus lupulus</i>	—	70	<i>Urtica dioica</i>	—	99
71	<i>Humulus lupulus</i>	—	71	<i>Urtica dioica</i>	—	100

~~HTB~~

~~1271.13.~~

